S
330.9
P42

STATE DOCUMENTS

Area Analysis

Kalispell-Flathead Subregion, Mont.

MH

Montana State Library
3 0864 1006 3594 8

STATE DOCUMENTS

11

Date Due

DEMCO NO. 294

3-16-59
APR 2 1 1960
JUN 2 8 1962
Jun 20
MSD DEC 1 1 '72
JAN 2 9 1992

[illegible]

[illegible]

NATIONAL RESOURCES PLANNING BOARD, REGION 9
Pacific Northwest Regional Planning Commission

Portland, Oregon, [illegible]

Montana State Planning Board, Helena, Montana
Cooperating

R. R. Renne and N. Helburn
6/41

152383

Regional Unit - Kalispell-Flathead Area, Montana

I. EMPLOYMENT PATTERN AND STABILITY CHARACTERISTICS

Predominantly farm-forest fringe — about 86 percent of total area forest land; 60 per cent commercial forest land. More than half of gainfully employed is farm personnel. Forests furnish about 430,000 man days of work annually, or enough to keep about 1700 workers steadily employed all year.

Employment in forest industries in the area very seasonal, heaviest employment during summer while agricultural operations also at peak. Forest resources declining.

Agriculture limited to the narrow valleys, and is largely small-scale farming with wheat, hay, small fruits, and vegetables the principal crops. Almost half of all farm operators report working off their farms for pay or income, an average of 101 days each per year, indicating necessity of supplementing meager farm income with other earnings.

II. FACTORS AFFECTING EMPLOYMENT AND INCOME STABILITY

A. Basic Natural Resources

Predominantly forest soils, Precipitation varied and spotty within the area, averaging around 15 inches; generally inadequate for successful crop production without supplementary irrigation water. Topography mountainous with narrow valleys, making forestry best land use in most of area, although many of the narrow valleys are suitable for farming and apparently best adapted to small fruits and vegetable production, grain and hay.

Crop conditions varied and uncertain in numerous parts of the subregion. Forest resources declining due to exploitative cutting on private lands and failure to follow sustained yield management.

A considerable amount of products are minerals, including lead, zinc, copper, silver, gold, platinum, some coal, tungsten, vermiculite, and antimony; but most are relatively thin ore bodies and costs of production comparatively high.

B. Essentials of Regional Economy

Definitely an area close to the margin for successful farming purposes due to topography, climate, soil characteristics, and distance from markets. Narrow, limited valleys make farming poorly adapted to large-scale machinery or big operating units.

Heavy influx of farmers from drouth stricken areas during thirties has resulted in large numbers of stranded and migratory farm families without adequate operating units available. Heterogeneous population, topography, and sparse population make strong cooperative activity, particularly in marketing, extremely difficult.

Inadequate farm operating units and declining forest resource have caused relatively low levels of living. Roads and highways inadequate for best development of the recreation values of the area. Farming in the economy is essentially a subsistence proposition with necessity for appreciable supplementary income from other sources, much of which has been supplied by public assistance, including general relief, in recent years, as the forest resource has declined through exploitative cutting.

C. Current Problems

Population has level of living significantly below average for state and nation; large numbers of stranded and migratory farm families without adequate operating units.

Heavy relief and public assistance expenditures, unequal tax burdens to support governmental services due to local concentration of migratory families from drouth areas in certain more favorable spots within the area, causing high expenditures for school services, and relief, and resulting in improper land use. No adequate land use controls; declining forest resource; high seasonal unemployment.

III. DIRECTION OF READJUSTMENTS

Forest resources of the area must be put on sustained yield management basis in order to help stabilize employment and income in the area. Activities should be planned which will eliminate as much seasonal variation in labor requirements for forest industries as possible

Land should be classified in order to determine best land use and prevent ill-advised and improper utilization of the lands, particularly those in valley areas which seem to be topographically suitable for agriculture. Cooperative effort to increase farm incomes or to reduce farm operating expenses, and to achieve better balanced operating units through a combination of crops, livestock, and part-time earnings off the farm should be encouraged.

Development of recreational land resources, if properly undertaken, could furnish important supplementary incomes and employment. Work necessary to put forest areas on sustained-yield basis would be basic employment possibility for the area during next few years. Continued research on expanded outlets for certain types of forest products very desirable.

IV. PROGRAM

A. Overall Recommendations

Extensive federal-state support to put forests on sustained-yield basis and develop recreation and grazing resources. Reorganize forest land tax assessment methods on lines of Wisconsin Forest Crop Law. State enabling legislation allowing zoning ordinances after scientific soil classification.

Federal legislation to permit pooling federal forest and private forest to operate on cooperative sustained-yield basis in some areas; in others, federal and state acquisition of private forests for sustained-yield management.

Education for cooperative purchasing and marketing of agricultural products.

Construct and maintain more adequate roads and highways, particularly north-south.

Build community centers for recreation, education, and religious activities.

FCA loans to clear cut-over lands for agriculture and buy equipment and livestock.

Encourage more economically feasible and socially desirable projects, especially irrigation projects for supplemental water on present units; some clearing; and development of some new farm units for part of present stranded farm population.

Explore practical possibilities of reducing local governmental costs, or improving governmental services, through improvement of local governmental administration.

B. Public Works Recommendations

Use public works to speed up program of adjustments needed. Priorities recommended:

(1) Reforest denuded areas; produce nursery stock, construct lookouts, airplane landing fields, etc. for maximum forest employment and forest-industries production on sustained-yield basis.

(2) Develop irrigation water resources fully, thus encouraging more stable and adequate farm units. Give preference to development of supplementary water for present units. Many small and medium-sized irrigation projects in area appear to have more real possibilities for stabilizing employment and income than some proposed larger multiple-use projects with strong localized support.

(3) Construct campgrounds, trails, roads, ski runs, etc., to develop recreational resources.

(4a) More caution in regard to road construction in areas with little recreational value or in locations out of harmony with future land-use pattern.

(4b) Construct schools only where influx of settlers burdens present facilities and permanent need is indicated.

(4c) Community centers for certain rural sections.

(4d) Public improvements in towns:-plan carefully to avoid unnecessary future burden on taxpayers.

(5) Needed research.

(a) on economic feasibility and social value of land development;

(b) on cooperative marketing and consumer cooperatives (both study and extension work).

(c) Market research to expand outlets for certain forest products.

(d) Studies of local government administration to reorganize for reduced costs and better governmental services.

Digitized by the Internet Archive
in 2013

http://archive.org/details/areaanalysiskali19renn

CONTENTS

Page

Summary Analysis Sheet 1

Basic Natural Resources. 1
  Topography. 1
  Soils 1
  Climate 2
  Vegetation. 2
  Minerals. 3

Patterns of Occupance. 3
  Population. 3
  Employment. 7
  Levels of Living. 7
  Agriculture 10
  Forestry. 19
  Mining. 29
  Manufacturing 33
  Distribution. 36
  Transportation. 36
  Government. 39
  Financial Condition of Local Governmental Units 39

Evidences of Maladjustments, or Economic Difficulties. 40
  Tax Delinquency 40
  Public Assistance 41
  Unemployment. 42
  Major Land Use Problems 45

A Recommended Program To Meet Existing Problems, and Increase Employment and Income Stability. 46
  General Direction of Readjustments. 46
  Improvements in Agricultural Land Utilization 50
  Other Recommendations 54

Statement of Appraisal of the Value of the Integrated Regional Approach to Employment Stabilization and Public Works Evaluation. 55

AREA ANALYSIS, KALISPELL-FLATHEAD SUBREGION, MONTANA

An Integrated Regional Approach to Employment Stabilization and Public Works

by

R. R. Renne and N. Helburn[*]

The Kalispell-Flathead Subregion, for the purposes of this report, consists of the four counties of Flathead, Lake, Lincoln, and Sanders, in northwestern Montana. The area is bounded on the east by the continental divide, on the north by British Columbia, on the west by Idaho, and on the south by the Missoula-Bitterroot subarea, including Mineral and Missoula Counties. These two counties, together with Ravalli County, are being reported upon by Mr. D. P. Fabrick.

I

Basic Natural Resources

The Kalispell-Flathead Subregion may be characterized as a forest, mining, and agricultural area. Forest resources are the most extensive, as far as acreage is concerned, although agriculture plays a very important part in employment and support of the population in the valley sections. Mineral resources are limited to comparatively small deposits of certain minerals.

Since the basic natural resources of an area are the foundation for the type of economy which can be successfully operated in an area, these basic natural resources will be described in some detail.

Topography. -- Physiographically, the area is situated in the Rocky Mountain region, and consists of mountains with altitudes of as much as 10,000 feet and valleys lying 2000 to 3000 feet above sea level. All the valleys are quite narrow, with the exception of two, one north of Flathead Lake, extending north to the town of Whitefish, and the other south of Flathead Lake, extending southward to St. Ignatius (See figure 1).

Soils. -- The soils of the area are forest soils, those of the mountains being formed from both sedimentary and igneous rocks, and those in the valleys from stream and glacial deposits. Some of the valleys possess soils which are comparatively fertile and relatively deep, but in many areas rock outcroppings occur and the soil is thin. No detailed or general reconnaissance survey of the soils of the area has been made. The Department of Agronomy of the Montana Agricultural Experiment Station is now making a survey of the soils of the Flathead Valley section, to determine their agricultural use capabilities.

---

[*] Montana State College, Bozeman; Consultant and Junior Research Technician, respectively, National Resources Planning Board.

Climate. -- The climate of the area varies widely. The average annual precipitation at Kalispell is 14.1 inches, at Libby, 16.0 inches.1/ Some idea of the great variation in climatic conditions in the subregion may be secured from figures 2 and 3, which show the average rainfall at Libby and at Kalispell. It will be noted that the distribution at Libby (see figure 2) seems to be characteristic of the Pacific Northwest climate -- that is, there is relatively heavy precipitation in the winter months and relatively low precipitation during the spring and summer months -- whereas at Kalispell, only 60 miles away (89 miles by road) the rainfall distribution is intermediate between the Pacific Northwest type and the Great Plains type (see figure 3).

Temperatures vary widely in the Kalispell-Flathead area, from a monthly mean of 20°F in January to 64°F in July, at Kalispell; at Libby, the corresponding monthly means are 23° and 65° respectively (refer to figures 2 and 3). Frost-free periods show great variation in the area, varying from 146 days at Kalispell to 96 days at Libby. However, at Fortine, a recording station, the frost-free period is only 80 days and frost is likely to occur during any month of the year (see figure 4). In many places in the area, frost is likely to occur during any month, and within the same valleys frost pockets occur which make growing conditions in any year extremely uncertain for any extensive area.2/

Vegetation. -- The natural vegetation of the area is that of coniferous forest. The two most valuable species in the area at present are ponderosa pine and western white pine. These two make up only 23 per cent and 4 per cent, respectively, of the present total saw-timber volume of the subregion. The area was originally almost entirely forested, and at present 86 per cent is forest land, two-thirds of which is classed by the Forest Service as commercial forest land and about one-third as noncommercial. Native vegetation in the southeastern part consists of grass and

---

1/ Data on average annual precipitation are based on records covering the period 1914-1940, and were secured from the offices of the State Meteorologist, Helena, Montana.

2/ For an analysis of these conditions in Sanders County, see McKay, M. J.: "A Social and Economic Survey of Sanders County Farms", M. S. Thesis, Montana State College, Bozeman, Montana, June 1940. "Agricultural Conditions and problems in Sanders County, Montana", Montana Agricultural Experiment Station Mimeo. Cir. 28, October 1940, contains an abstract of the more important findings in Mr. McKay's thesis.

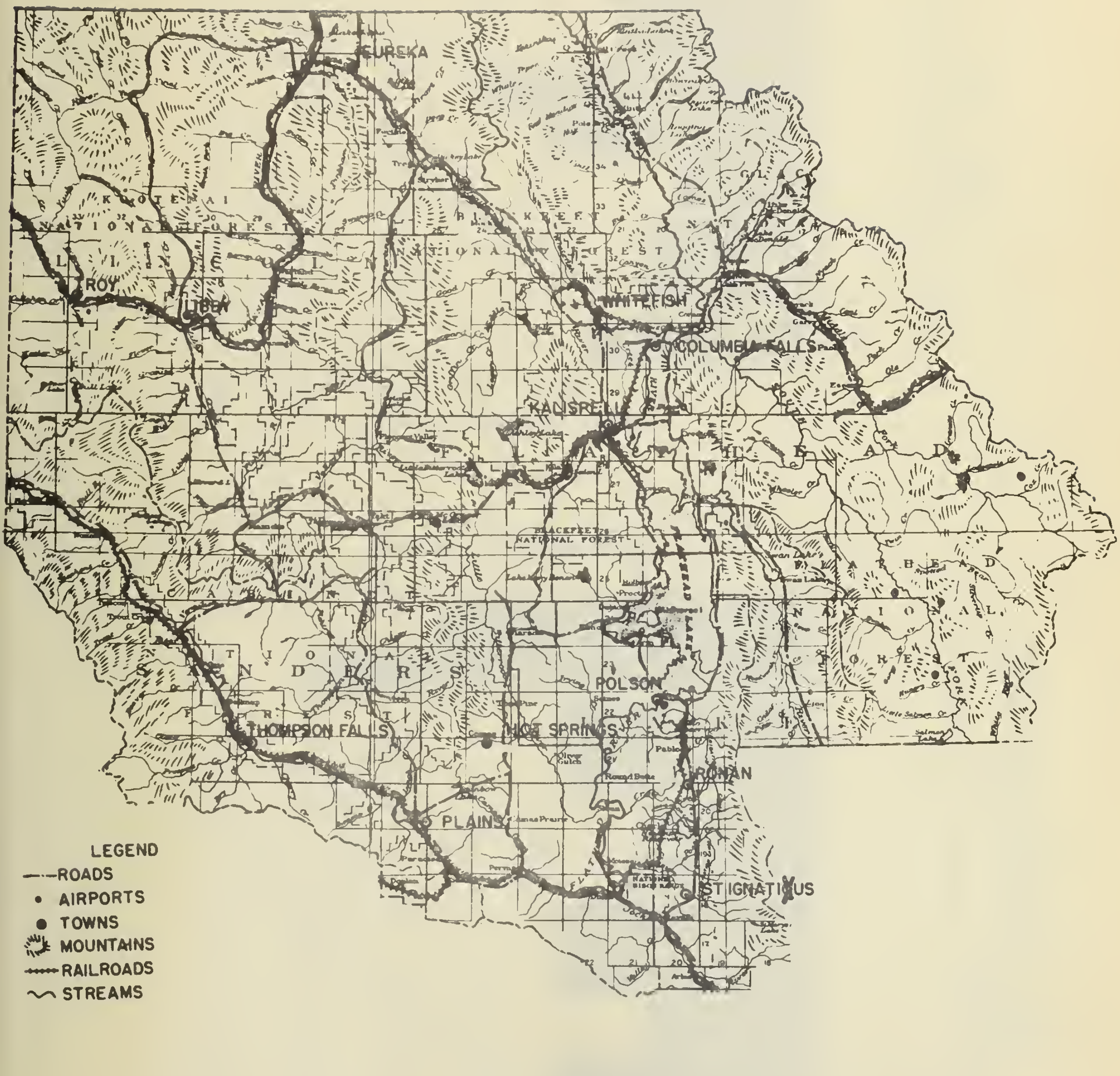


Figure 1.--Topography, Drainage, Transportation Facilities, and Incorporated Towns in the Kalispell-Flathead Subregion.

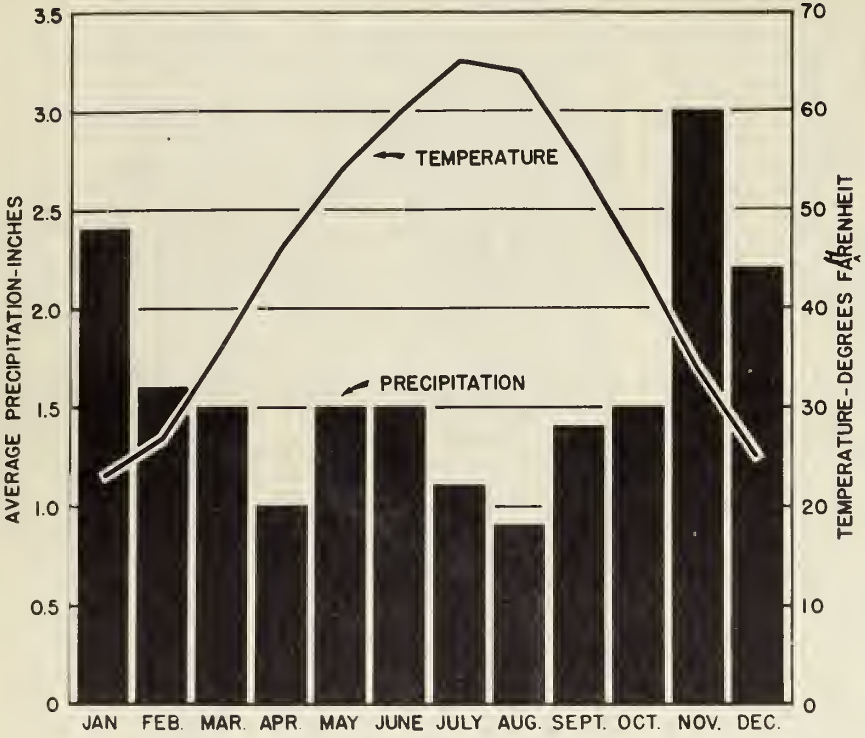


Figure 2.--Average Monthly Precipitation and Temperature at Libby, Montana.
Source: Reitz, L. P.: "Crop Regions in Montana as Related to Environmental Factors", Montana Agricultural Experiment Station Bulletin 340, May 1937, Bozeman, Montana

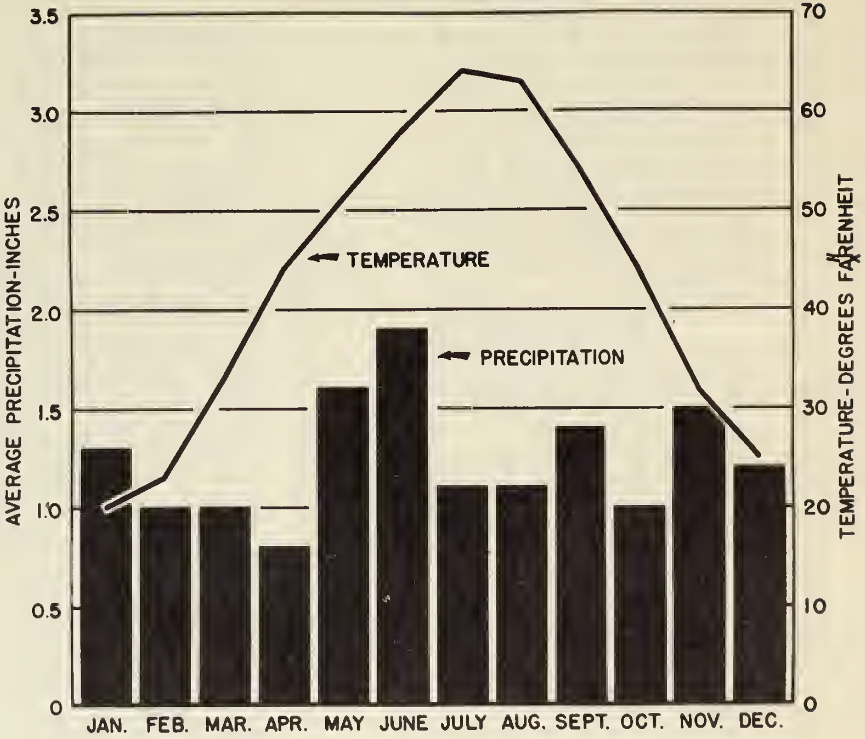


Figure 3.--Average Monthly Precipitation and Temperature at Kalispell, Montana
Source: Reitz, L. P.: op. cit.

brush, but this is true only at the lower altitudes.

Minerals. -- The area is only sparsely underlaid with valuable minerals, the most important of which, based on present use, is a combination of two or more of the following minerals: Gold, silver, lead, zinc, and copper. However, a small amount of tungsten is mined in the southern part of Lincoln County (see figure 5). One company near Libby has developed a deposit of vermiculite, a form of mica which "has all the properties of asbestos and a sixth of the weight".[3] There are some coal deposits in the area, but none of any great commercial significance. Figure 5 shows the areal distribution of mineral resources in the four-county area.

II

Patterns of Occupance

What patterns of human occupance have been superimposed upon the basic natural resources of the Kalispell-Flathead Subregion? Are these patterns well adapted to harmonize with these basic natural resources, or do they give rise to unemployment and instability of income? An analysis of these patterns of occupance will reveal not only the types of employment and stabilization problems which exist but will also help to point out the direction and character of readjustments which must be made to bring about employment stabilization and conditions of satisfactory living in the area.

Population. -- The population of the four counties, according to the 1940 census, is 52,564, or about a tenth of the total population of the State of Montana. The largest city in the area is Kalispell, with 8,245 people. The next largest city is Whitefish, with 2,602 people, also located in Flathead County. There are 12 incorporated places in the area, three in each county (see figure 1), and a total population in these incorporated areas of 21,008, or approximately two-fifths of the population of the area.

More than four-fifths of the population of the area is classified as rural (41,722 being rural and 10,827 urban). The 1940 data showing the farm population of the area are not available; however, in 1930 the farm population totaled 15,471. Thus, in spite of the fact that there are 12 incorporated towns and cities in the four-county area, the population is predominantly rural and there are no large metropolitan areas in the subregion which serve as a dominating service center.

The subregion has experienced a considerable increase in population during the decade of the thirties amounting to more than a fourth (26.6 per cent) of the population. Lake County has experienced the greatest increase (41.4 per cent) and Lincoln the least (11.2 per cent), as shown by Table I. This increase in population in the area during the ten-year period 1930-1940 has resulted from migrations of drouth-stricken farmers from Eastern Montana, the Dakotas, and other Great Plains states,4/ and has been an important factor contributing to the serious economic problems of the area in recent years. The natural resources of the area, particularly the green mountain valleys and comparatively lush vegetative growth, have tended to create exaggerated appraisals of the area's productiveness for agricultural use. Moreover, the spottiness of the climate of the area, combined with the fact that it is not a heavy rainfall section (the average precipitation for the area is about 14 inches), has made it difficult for many of these families which have migrated into the area during the thirties to make a satisfactory living, with the result that relief expenditures have been large and the burden placed upon local governmental services, particularly schools, has been extremely heavy, as will be indicated later.

---

[3] See "Directory of Montana Mining Properties", compiled by WPA Mineral Resources Survey in cooperation with the Mining Association of Montana, Montana School of Mines, Butte, Montana, May 1940. Multilithed. Page 61.

This increase in population has not been evenly distributed over the four-county area. This has tended to localize problems of adjustment in certain sections of the subregion. Figure 6 shows the population change from 1930 to 1940, by minor civil divisions, in the four-county area. Note from this figure that the northern half of Lake County, the western half of Sanders County, and small districts in the southwestern and northeastern corners of Lincoln County have experienced the greatest percentage increases. Note also that certain districts have experienced appreciable decreases in population, some from one-fourth to one-half, during the decade of the thirties.

The school census for the years 1935, 1938, and 1940 shows that the number of children under six years of age increased in each of these counties during the period 1935-1938 and from 1938 to 1940, while the number of children from 6 to 21 increased from 1935 to 1938, but decreased in the period 1938-1940 in all but one of the counties (see Table II). The decrease in number of children 6 to 21 in the latter period reflects the migration of youth from 17 to 21 years of age out of the area to take advantage of employment opportunities offered in other areas -- chiefly employment opportunities growing out of recent national defense developments. Undoubtedly the 1941 census to be taken in October will reveal a continuation of this outward migration trend, particularly for the employable groups, which will be reflected in smaller numbers of youth from 17 to 21.

4/ According to McKay, more than one-fourth of the farm families in western Sanders County came to the area during the two years 1935 and 1937, the years in which heaviest migration from the Plains occurred. (See his Master's Thesis, "A Social and Economic Survey of Sanders County Farms", page 43.)

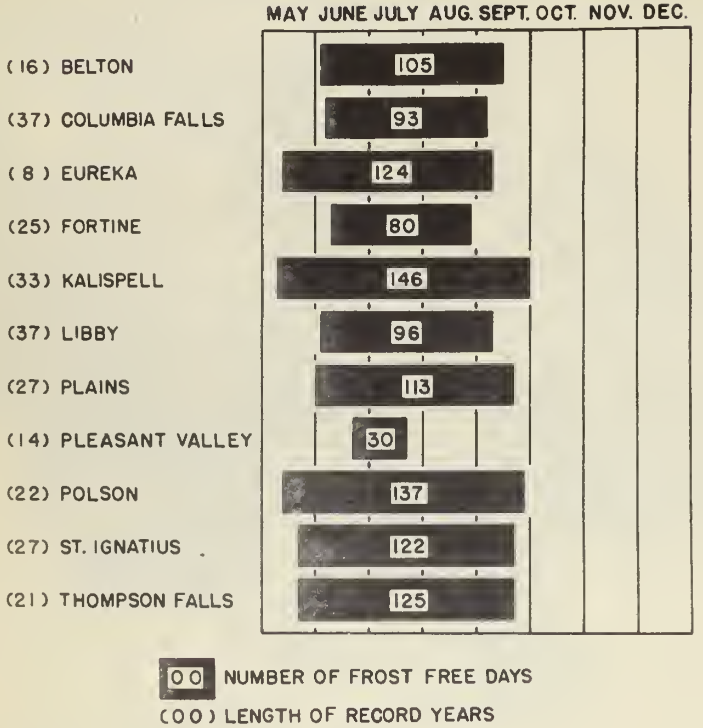


Figure 4.--Frost-Free Period at Selected Stations, Kalispell-Flathead Subregion, Montana
Source: Reitz, L. P.: op. cit.

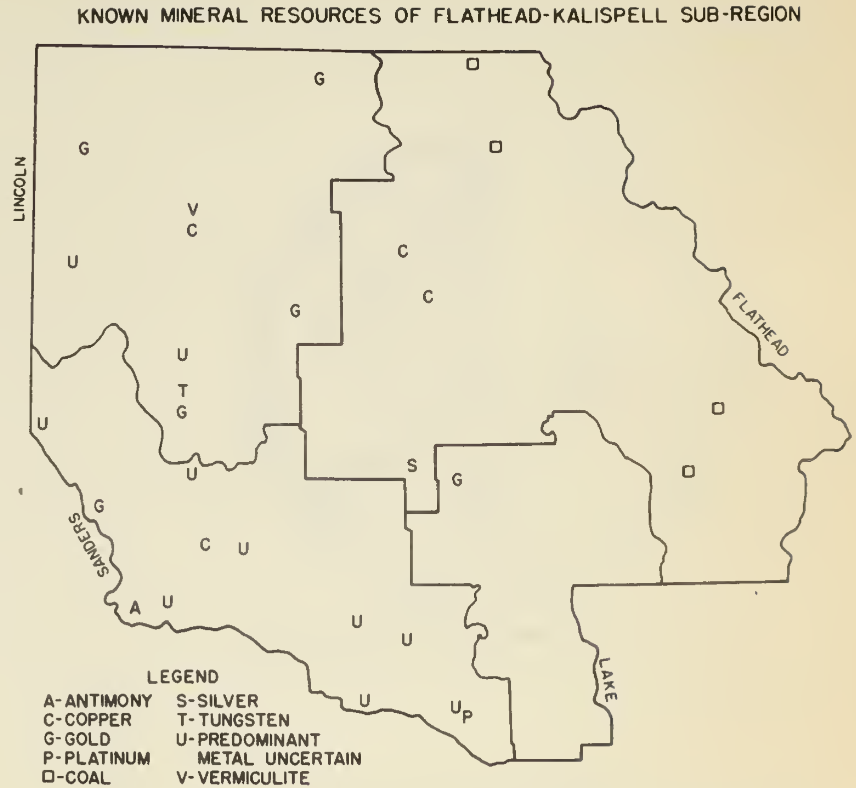


Figure 5.

Source: "Directory of Montana Mining Properties", (Mineral Resource Survey), Work Projects Administration, Montana School of Mines, Butte, May 1940

POPULATION CHANGE 1930-1940 BY MINOR CIVIL DIVISIONS
FOUR NORTHWEST COUNTIES, MONTANA

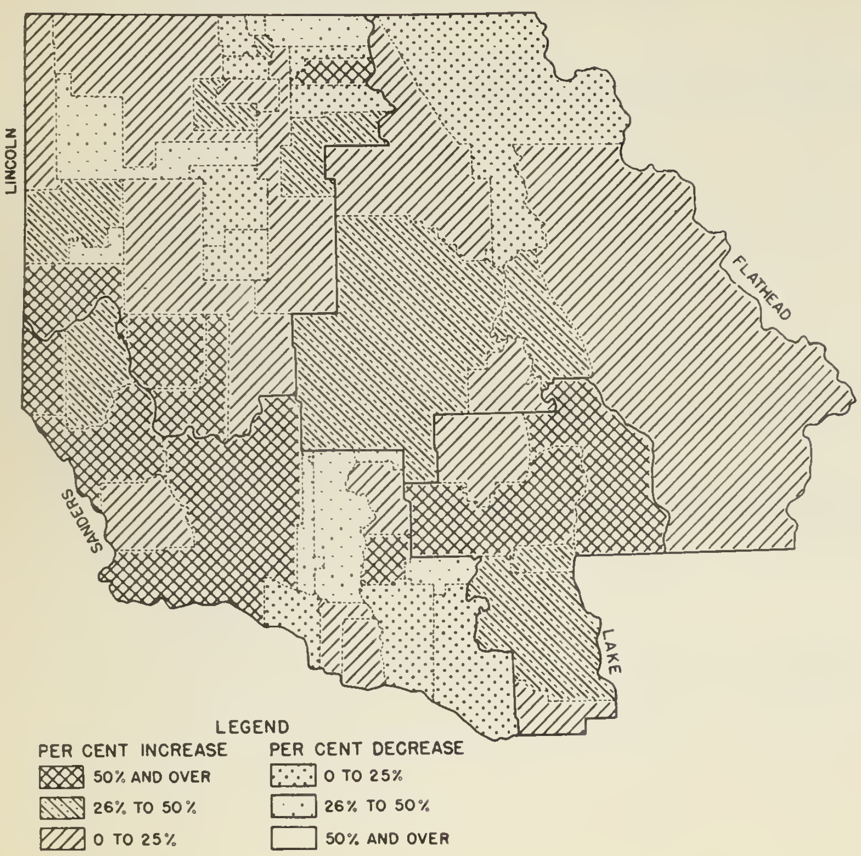
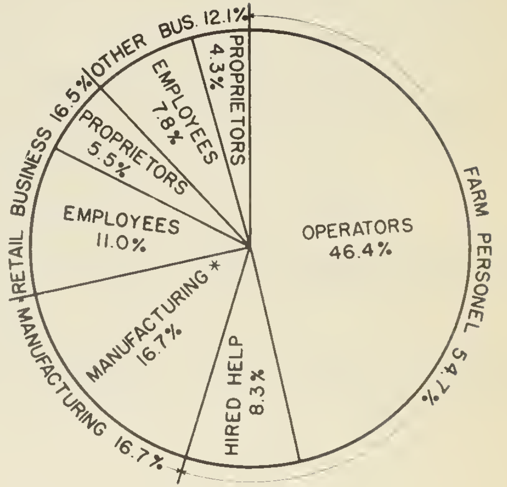


Figure 6.

Source: Sixteenth Census, 1940



* DOES NOT INCLUDE PROPRIETORS

Figure 7.--Personnel in Agriculture, Industry, and Business, 1935, Kalispell-Flathead Subregion.
Source: Holleran, O. C.: "Industrial Market Data Handbook", Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce. Domestic Commerce Series 107, Washington, D. C. 1939.

TABLE I. Urban and Rural Population, Kalispell-Flathead Subregion[a/]

	Flathead			Lake			Lincoln			Sanders			Total		
	1930	1940	% Inc.	1930	1940	% Inc.	1930	1940	% Inc.	1930	1940	% Inc.	1930	1940	% Inc.
Urban	8897	10847	21.9	--	--	--	--	--	--	--	--	--	8897	10847	21.9
Rural	10303	13424	30.3	9541	13490	41.4	7089	7882	11.2	5692	6926	21.7	32625	41722	27.9
Farm	5882	--	--	5144	--	--	1865	--	--	2580	--	--	15471	--	--
Non-Farm	4421	--	--	4397	--	--	5224	--	--	3112	--	--	17154	--	--
Total	19200	24271	26.4	9541	13490	41.4	7089	7882	11.2	5692	6926	21.7	41522	52569	26.6
Incorporated Places	9534	11484	20.4	1992	3188	b/60.0	3110	3545	13.9	1437	2023	40.8	16073	20240	b/25.9

a/ Data from fifteenth and sixteenth Censuses (1930 and 1940).

b/ St. Ignatius, incorporated after 1930, not included.

TABLE II. School Population, Kalispell-Flathead Subregion[a]

	1935	1938	1940
No. of children under 6 years:			
Flathead	1,807	2,167	2,286
Lake	1,342	1,624	1,642
Lincoln	709	799	862
Sanders	574	595	675
Total	4,432	5,185	5,465
No. of children 6-21 years:			
Flathead	6,379	7,406	6,898
Lake	4,058	4,906	4,447
Lincoln	2,064	2,202	2,176
Sanders	1,719	1,922	1,945
Total	14,220	16,436	15,466

a/ Data taken from county school superintendents' annual reports.

Employment. -- A total of 10,273 people were employed in various occupations in 1935, in the four-county area, excluding employment in government and the professions. In 1930, the total gainfully employed, including employment in government and the professions, amounted to approximately 14,000. These 10,273 employees in agriculture and manufacturing and business represent approximately a fifth (19.5 per cent) of the total population.

Personnel employed in agriculture comprises nearly 55 per cent of the total employment, excluding government and the professions, while approximately one-sixth (16.7 per cent) of the total employment is in manufacturing, and the remaining 28.6 per cent in business, 16.5 per cent being in retail business and 12.1 per cent in other business (see figure 8).

The data in figure 8 indicate that most of the personnel employed in agriculture are farm operators, there being only 854 hired farm laborers out of a total farm personnel of 5620. In other words, the agriculture of this area is of a small-sized family operating unit type, and very little hired help is used. Further evidence of the small size of the farm operating units is seen in the number of farm operators who do part-time work off the farm to secure supplementary income. In 1935, 2265 farm operators, or nearly half of the total number of farm operators in the four-county area (47.5 per cent), reported working part of the time off the farm. The proportion varied from 40.6 per cent in Lake County to 65.7 per cent in Lincoln County (see Table III). The average number of days worked off the farm was 101 per farm operator who engaged in such part-time employments. The average number of days worked varied from 86 in Sanders County to approximately 120 in Lincoln County (see Table III). Thus, nearly half of the farm operators work off the farm for pay, and work, on an average, over 100 days per year.

Levels of Living. -- On the basis of 6 indices used, the population of the Kalispell-Flathead Subregion has a relatively low level of living compared with the average for the population of the state as a whole and for that of the nation as a whole. Table IV shows the number of passenger automobiles registered per 100 families, the number of families with radios per 100 families, the number of residential telephones per 100 families, the number of domestic electric meters per 100 families, the circulation of twelve national magazines per 100 families for each of the four counties in the Kalispell-Flathead Subregion, and the number of individual federal income-tax returns filed per thousand persons. The average for the four-county area, the Montana average, and the United States average are shown. It can be seen from this table that the population of the four-county area is below the Montana average in each of these six indices, being particularly below in the number of domestic electric meters and the circulation of twelve national magazines and number of federal income-tax

TABLE III. Work for Pay or Income Not Connected with this Farm: Kalispell-Flathead Subregion, 1934[a]

	Flathead	Lake	Lincoln	Sanders	Total
Total farm operators reporting (number)	643	688	482	452	2265
Percent of all farm operators	43.2	40.6	65.7	53.4	
Total number of days worked for pay	68741	63667	57638	38880	228926
Average Days per operator	106.9	92.5	119.6	86.0	101.1

a/ Census of Agriculture, 1935.

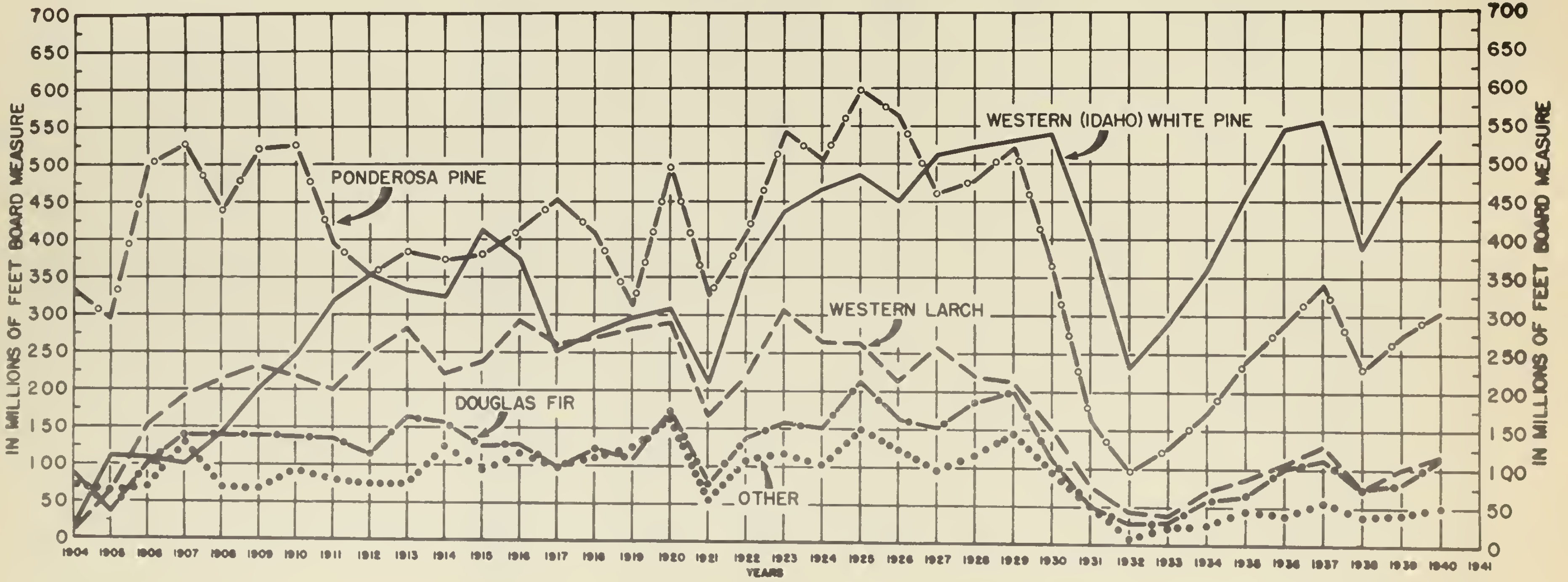


Figure 8.--Lumber Production by Years, 1904-1940, Northern Rocky Mountain Region.
Source: Statistics issued by the Division of Forest Products, Northern Rocky Mountain Forest and Range Experiment Station, Missoula, Montana.

TABLE IV. Index of Levels of Living for Kalispell-Flathead Subregion[a]

	Flathead	Lake	Lincoln	Sanders	4 co. Aver.	Mont. Aver.	United States Aver.
No. of Passenger automobiles registered per 100 families - 1936	87	81	60	63	77	84	75
No. of families with radios per 100 families - 1938	85	79	80	79	81	84	89
No. of residential telephones per 100 families - 1935	32	7	-	12	21	25	36
No. of domestic electric meters per 100 families - 1930	46	19	36	-	37	49	67
Circulation of 12 National magazines per 100 families - 1937	156	115	96	91	125	143	94
Individual income tax returns per 1,000 persons - 1935	29	8	22	19	20	37	38

a/ Data from: Haynes, B. P. and Smith, G. R., "Consumer Market Data Handbook", 1939 edition. U. S. Dept. of Commerce, Bureau of Foreign and Domestic Commerce, Domestic Commerce Series 102, Washington, 1939.

returns filed, and that the four-county population is below the national average in all but the circulation of twelve national magazines and the number of passenger automobiles registered per 100 families, being exceedingly below the national averages in the number of domestic electric meters and the number of residential telephones and number of income-tax returns filed.

An analysis of Montana state income-tax returns filed during the period 1935-1938, inclusive, shows that the four-county subregion is below the average for the state in the proportion of the population filing income-tax returns, and in the proportion filing taxable returns (see Table V). The number of individual income-tax returns filed with the Federal Government for each of the four counties and for the subregion as a whole, in 1934, and the distribution of these returns by various income groupings, together with a similar analysis for state income-tax returns filed during the period 1935-1938, inclusive, is shown in Table VI.

Agriculture. -- The agriculture of the area is restricted to the valleys, all of which are narrow except the areas north and south of Flathead Lake, which extend over a width of as much as 25 miles at some points. Farming in these valleys is for the most part a small-size proposition, as was revealed by the analysis of employment in agriculture and the proportion of farmers working off their farms for pay.

The average size of farm in acres, according to the 1940 census, varies from 165 acres in Flathead County to 360 acres in Sanders County, while the average for the four-county area is 245 acres. These averages do not reveal the distribution of farms by size, however. In 1940 there were 329 farms out of a total of 4762, or 6.9 per cent of the total, which had less than 10 acres each, and 920 farms, or 19.3 per cent of the total, which had between 10 and 49 acres each. An additional 963 farms had between 50 and 99 acres each, so that nearly half (46.5 per cent) of all the farms in the area had less than 100 acres each. Only 355 farms in the area had 500 or more acres each, and only 135 of these were of 1000 acres or more (see Table VII).

More significant than the present distribution of the farms by size is the trend in this distribution. During the five years 1935-1940, there was an increase of nearly one-sixth (15.9 per cent) in the number of farms under ten acres, an increase of one-eighth (12.5 per cent) in the number of farms between 10 and 49 acres, and an increase of 2.1 per cent in the number of farms between 50 and 99 acres. All other size-of-farm groupings showed significant declines in number during this five-year period, with the exception of the group from 175 to 259 acres, which had less than one-half of one per cent increase. There was a decline of nearly a sixth (16.2 per cent) in the number of farms of a thousand or more acres each, and a decrease of more than 7 per cent in the

TABLE V. Number of State Income Tax Returns per 1,000 Persons[a]
Kalispell-Flathead Subregion[b]

	1935	1936	1937	1938
Flathead	42.8	50.7	55.5	56.1
Lake	11.7	14.1	24.5	17.6
Lincoln	33.3	32.7	42.7	40.2
Sanders	25.8	27.4	27.4	28.2
Four County Average	31.7	36.0	42.4	40.7
State Average	50.8	56.0	62.6	61.0

a/ 1930 population figure used throughout.

b/ Data from State Net Income Tax Analysis compiled by Work Projects Administration.

TABLE VI. Distribution of State and Federal Income Tax Returns by Size Groups, Kalispell-Flathead Subregion

	Flathead	Lake	Lincoln	Sanders	Four county total
State income tax returns a/					
1935 total	822	112	82	147	1,163
Net income below 1,000	65	13	8	18	104
1,000-2,999	612	72	52	110	846
3,000-4,999	99	18	18	14	149
5,000-9,999	40	9	3	5	57
10,000 and over	6	-	1	-	7
Federal income tax returns b/					
1934 total	391	20	75	65	561
Net income below 1,000	18	3	3	-	24
1,000-2,999	265	12	51	47	375
3,000-4,999	84	5	19	12	120
5,000-9,999	23	-	1	5	29
10,000 and over	1	-	1	1	3

a/ Data from State Income Tax Analysis of Work Projects Administration.

b/ Data from Haynes and Smith, Op. cit.

TABLE VII. Farms by Size Groups, Kalispell-Flathead Subregion[a]

Number of acres in farm	1940	Per cent of total 1940	1935	Per cent change 1935-40
Under 10	329	6.91	284	15.85
10-49	920	19.32	818	12.47
50-99	963	20.22	943	2.12
100-174	1,190	24.99	1,297	-8.25
175-259	466	9.79	464	.43
260-499	539	11.32	562	-4.09
500-999	220	4.62	237	-7.17
1000 and over	135	2.83	161	-16.15
Average size of farm	244.95		289.57	-15.41
Total number of farms	4,762	100.00	4,766	- .08
Total land in farms	1,166,466		1,380,068	-22.72

a/ Data from Sixteenth Census, 1940.

number of farms ranging from 500 to 999 acres in size (see Table VII). This increase in the number of very small farms and decrease in the number of large farms reflects the effect of the influx of migratory farm families from the drouth areas during these years on the agricultural land-use pattern. With the comparatively low average rainfall and very uncertain crop conditions which make the area a comparatively high-risk one from the standpoint of agricultural land use, it can be seen that operators of these very small units are not on a satisfactory self-sustaining basis. They must secure part-time employment in nearby industry or occupations other than farming, or be subsidized through relief grants or loans if they are to live in the area on such small farm units.

The number of acres of crop land harvested per farm in the four-county area averaged only 44.3 acres in 1939, while the number of acres of woodland averaged 49.8. The acreage per farm of plowable pasture averaged 19.4, and the acreage of all other land, principally non-plowable pasture land, amounted to 121.4 acres per farm. There is considerable variation in the distribution of these acreages per farm among the four counties (see Table VIII). The fact that there is an average of but 44 acres of crop land harvested per farm and less than 20 additional acres of plowable pasture land available per farm indicating the small scale upon which the agricultural operations in the valley areas are undertaken. The relatively large acreages of woodland and of all other land, mostly non-plowable pasture or cut-over land, indicate that any considerable expansion in agricultural land use in the four-county area cannot be undertaken. An average acreage of crop land harvested of only 44 acres per farm is too small to support adequately a farm family even in the more humid, productive agricultural areas of the nation; and aside from particular operating units that have specialty crops, it is far too small to support the average farm family in this subregion.

If all of the crop land in the area were irrigated with an adequate supply of water, the agricultural income of the farm operators would be much more stable and comparatively more adequate. However, less than half of the farms in the four-county area reported irrigated land in 1940 (1985 farms out of a total of 4762, or 41.7 per cent). The total irrigated acreage is very small, amounting to 98,419 acres or only 8.4 per cent of the total land in farms in the four-county area (see Table IX). Thus, the average irrigated acreage per farm is extremely small, again reflecting the inadequacy of the present farm operating units to support the farm families in the area.5/

5/ A more detailed statement concerning the inadequacy of the farm operating units and of the agricultural land resources to support present farm population may be found in McKay, M. J.: "A Social and Economic Survey of Sanders County Farms", and his "Agricultural Conditions and Problems in Sanders County, Montana".

TABLE VIII.--ACRES OF FARM LAND ACCORDING TO USE, KALISPELL-FLATHEAD SUBREGION a/

	1939		1934		1929		Acres per farm		
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total	1939	1934	1929
Cropland harvested	211,112	18.09	215,476	15.61	195,132	18.02	44.33	45.21	52.57
Crop failure	4,419	.37	6,041	.44	11,545	1.07	.87	1.27	3.11
Cropland idle or fallow	43,420	3.71	46,561	3.37	55,315	5.12	9.12	9.77	14.90
Plowable pasture	92,420	7.91	63,330	4.59	48,561	4.48	19.41	13.29	13.08
Woodland	236,914	20.30	477,582	34.61	280,129	25.87	49.75	100.21	75.47
All other land	578,181	49.62	571,088	41.38	492,111	45.44	121.40	119.83	132.55
TOTAL	1,166,466	100.00	1,380,078	100.00	1,082,793	100.00	244.95	289.57	291.70

a/ Data from 16th Census, 1940.

TABLE IX.— IRRIGATED FARM LAND, KALISPELL-FLATHEAD SUBREGION, 1940 a/

	Flathead	Lake	Lincoln	Sanders	Total, 4 counties
No. of farms, 1940	1701	1673	534	854	4,762
No. reporting irrigated cropland or pasture	212	1211	197	365	1,985
Per cent of total	12.5	72.4	36.9	42.7	41.7
All land in farms	281,018	472,296	105,377	307,775	1,166,466
Irrigated cropland	7,953	55,761	6,016	10,947	80,677
Irrigated pasture	814	14,529	317	2,082	17,742
Total irrigated land	8,767	70,290	6,333	13,029	98,419
Per cent which irrigated land is of all land in farms	3.1	14.9	6.0	4.2	8.4

a/ Data from 16th Census, 1940.

The comparatively large acreage of "all other land", which is composed largely of cut-over forest land and pasture, might lead an observer unfamiliar with the area to conclude that the farm operating units have a comparatively good income from livestock to supplement their farm income. However, an analysis of livestock numbers in the four-county area indicates that the number of cows and heifers and the number of sheep and lambs, hogs and pigs, and chickens per farm are comparatively small. For example, in 1940 the number of cows and heifers kept for milk averaged less than 4 per farm, and the number of cows and heifers kept mainly for beef averaged approximately two per farm. The number of sheep and lambs per farm averaged approximately 10, the number of hogs and pigs slightly over two, the number of chickens approximately 42, the number of horses and colts per farm 3. These livestock data indicate that the income from livestock per farm is not large, and is not adequate, with the small crop income, to sustain the farm families now situated in the area. It is significant that the total number of cows and heifers and sheep and lambs on farms in the area in 1940 decreased appreciably from 1935, the number of cows and heifers totaling 29,240 in 1940 compared with 38,370 in 1935, or more than 9,000 less. The number of sheep and lambs totaled 49,140 in 1940, compared with 83,008 in 1935, or nearly 34,000 less. There were some 2200 fewer horses and colts in the area in 1940 than in 1935, but nearly 2000 more pigs and more than 15,000 more chickens. This increase in hogs and chickens and the decline in horses, cows, and sheep reflect the tendency to take up two or three acres, or any small piece of land, to produce some of the living of the many stranded and migratory farm families which have come into the area in recent years. The acreages available to many of these families are so small that there is no adequate pasture for the grazing animals like sheep, cattle, and horses, and only hogs and chickens can be maintained in comparatively large numbers.

Table X shows the acreages of land used for various crops in the Kalispell-Flathead Subregion in 1935 and 1940. It can be seen from this table that the greatest increases in crop acreages are for barley, corn, oats, and wheat, while the acreage devoted to hay and potatoes was less in 1940 than in 1935. It will be noted, however, that hay is by far the largest user of agricultural land, utilizing approximately half of the total crop land, with wheat second, utilizing more than a fourth. Thus, hay and wheat together use more than three-fourths of the crop land of the area. Without an increase in the irrigated land and more adequate supplies of water available for the land, these two crops -- hay and wheat -- are probably best adapted to the natural climatic conditions of the area.

Nearly two-thirds (63 per cent) of the farms of the area are fully owned by the operators, but these full-owner farms comprise only a third of the land in farms (33 per cent). Seventeen per

TABLE X.--ACRES HARVESTED OF SELECTED CROPS IN KALISPELL-FLATHEAD SUBREGION a/

	Flathead		Lake		Lincoln		Sanders		Four county total			
									1935		1940	
	1935	1940	1935	1940	1935	1940	1935	1940	Number	Per cent of total	Number	Per cent of total
Corn for all purposes	447	275	314	712	21	21	83	123	865	.40	1,131	.54
Oats, threshed & unthreshed	6,639	7,019	3,995	5,949	775	657	1,427	1,218	12,836	5.95	14,843	7.03
Barley, threshed	5,649	8,512	2,425	4,880	221	251	358	504	8,653	4.02	14,147	6.70
Any wheat threshed	24,846	24,040	23,021	24,844	1,514	1,201	5,443	5,925	54,824	25.44	56,010	26.53
All hay, (exclusive of sorghums)	39,095	33,000	45,625	42,329	12,699	9,916	13,289	20,912	110,708	51.38	106,157	50.28
Potatoes	2,276	1,512	554	509	424	170	336	198	3,590	1.67	2,389	1.13
Total cropland harvested	82,992	78,803	82,448	87,843	16,595	14,271	33,441	30,195	215,476	100.00	211,112	100.00

a/ Data from 16th Census of the United States, 1940.

cent of the farms are operated by part owners, but more than half of the total land in farms is included in these part-owner farms. Full tenancy is comparatively low, amounting only to one-fifth of the farms and 15 per cent of the total land in farms. Table XI indicates that the proportion of full tenancy has been declining, having decreased some 23.8 per cent from 1935 to 1940, the 1940 proportion also being below that of 1930.

Forestry. -- Approximately 86 per cent of the land area of the Kalispell-Flathead Subregion is classified by the U. S. Forest Service as forest land, and three-fifths of the land area (60.1 per cent) is classified as commercial forest land. Forestry, from the standpoint of land area, is thus the most important land use in the subregion (see Table XII). Nearly three-fifths of the total commercial forest land area is in national forests (57.9 per cent) and nearly another fifth (17.6 per cent) in large private holdings. Slightly more than one-tenth (11.5 per cent) is in small private holdings, and the rest is owned by the state and county governments, the U. S. Indian Service, and a very small amount by the Federal Government in the form of scattered public domain tracts (see Table XIII). Ownership is significant to utilization, since the Federal Government, through its supervisory Forest Service, has attempted to work out a program of sustained-yield management which will maintain the basic forest resources in a condition which will stabilize employment and income in the area. Private owners of commercial forest land, particularly large corporations, tend to cut the forest resources exploitatively in order to secure the immediate income-producing values of the forest lands, with the result that there is no tendency to operate on a sustained-yield basis but rather to remove the basic forest resources, thereby increasing the instability of employment and incomes.

Obviously, the forest resources of the subregion are the basic natural resource furnishing employment for the people of the area. Using a rough conversion factor of one man-day's work per thousand board feet (log scale) applied to the saw-log production shown in Table XIV, one finds that the logging operations in the area (from stump to sawmill) required some 123,000 8-hour man days yearly during the period 1931 to 1940. Although no data are available showing what proportion of the saw-log production possible was milled within the four-county area, the Forest Service states that it is safe to assume that practically all of the estimated 150,000 8-hour man days (1 1/4 days per thousand board feet, log scale) applied annually during the period 1931-1940 in converting the saw-logs produced into lumber were applied in the four-county area.[6] The 273,000 8-hour man days of labor utilized in logging and milling lumber indicate the total volume of employment in the four-county

---

[6] These data were secured from the officials of the Northern Rocky Mountain Forest and Range Experiment Station, Missoula, Montana.

TABLE XI. NUMBER OF FARMS AND LAND IN FARMS BY TENURE GROUPS, KALISPELL-FLATHEAD SUBREGION a/

	Number of farms		Land in farms		Average size of farm
	Number	Per cent of total	Acres	Per cent of total	
1930					
Full owners	2,148	57.87	334,907	30.93	155.92
Part owners	746	20.10	502,168	46.38	673.15
Managers	39	1.04	26,697	2.46	684.54
Tenants	779	20.99	219,021	20.23	281.16
Total	3,712	100.00	1,082,793	100.00	291.70
1935					
Full owners	2,676	56.15	350,160	25.37	130.85
Part owners	846	17.75	768,703	55.71	908.63
Managers	10	.21	7,617	.55	761.70
Tenants	1,234	25.89	253,588	18.37	205.50
Total	4,766	100.00	1,380,068	100.00	289.57
1940					
Full owners	3,003	63.06	386,992	33.17	128.87
Part owners	801	16.82	594,054	50.93	741.64
Managers	17	.36	13,714	1.18	806.71
Tenants	941	19.76	171,706	14.72	182.47
Total	4,762	100.00	1,166,466	100.00	244.95

a/ Data from 16th Census, 1940.

TABLE XII.--FOREST LAND AREA, KALISPELL-FLATHEAD SUBREGION, 1940 a/

	Flathead		Lake		Lincoln		Sanders		Four county total	
	Acres	Per cent	Acres	Per cent	Acres	Per cent	Acres	Per cent	Acres	Per cent
Total land area	3,270,377	100.00	949,707	100.00	2,340,950	100.00	1,772,541	100.00	8,333,575	100.00
Forest land	2,904,726	88.82	536,646	56.51	2,268,676	96.91	1,455,481	82.11	7,165,529	85.98
Commercial	1,610,082	49.23	444,879	46.84	1,845,865	78.85	1,108,694	62.55	5,009,520	60.11
Non-comm.	1,294,644	39.59	91,767	9.67	422,811	18.06	346,787	19.56	2,156,009	25.87
Non-forest land	365,651	11.18	413,061	43.49	72,274	3.09	317,060	17.89	1,168,046	14.02
Cultivated, stump, pasture, and grass land	218,251	6.67	379,124	39.92	59,474	2.54	291,898	16.47	948,747	11.39
All others	147,400	4.51	33,937	3.57	12,800	.55	25,162	1.42	219,299	2.63

a/ Data from U. S. Forest Service, Regional Office, Missoula, Montana.

TABLE XIII.-- LAND OWNERSHIP OF COMMERCIAL FOREST LAND, KALISPELL-FLATHEAD SUBREGION, 1940 a/

	Flathead		Lake		Lincoln		Sanders		Four county total	
	Acres	Per cent	Acres	Per cent	Acres	Per cent	Acres	Per cent	Acres	Per cent
Total	1,610,082	100.00	444,879	100.00	1,845,865	100.00	1,108,694	100.00	5,009,520	100.00
National Forest	925,143	57.46	92,831	20.87	1,319,360	71.48	564,783	50.94	2,902,117	57.93
Large Private	282,956	17.58	81,909	18.22	295,754	16.02	220,295	19.87	880,095	17.57
Small Private	252,118	15.66	53,456	12.02	148,046	8.02	122,852	11.08	576,472	11.5
State	126,525	7.86	50,137	11.27	52,935	2.87	48,249	4.36	277,846	5.54
County	11,783	.73	3,917	.88	23,848	1.29	3,324	.30	42,872	.86
Indian Service	6,837	.42	163,326	36.71	-	-	136,942	12.35	307,105	6.13
Public Domain	4,720	.29	122	.03	5,922	.32	12,249	1.10	23,013	.46

a/ Data from U. S. Forest Service, Regional Office, Missoula, Montana.

TABLE XIV a/

Production of Forest Products--Lincoln, Flathead, Lake and Sanders Counties

A. Sawlog Production:

Year	Sawlogs Cut (Millions of bd. ft.--Log Scale)	
	Ponderosa & White Pine	Total
1925	122	243
1926	132	232
1927	114	240
1928	105	220
1929	121	242
1930	95	176
1931	45	88
1932	27	59
1933	47	77
1934	60	104
1935	78	133
1936	91	166
1937	93	179
1938	70	122
1939	72	130
1940	78	168

B. Minor Timber Products Production (Average Annual b/):

Product	Unit	No. Units	Converted to M bd. ft. Log Scale
Poles	Lin. Ft.	1,198,235	3,427
Piling	Lin. Ft.	93,245	373
Hewed Ties	Piece	32,211	1,288
Shingles	Square	569	63
Pulpwood	Cord	3,416	1,708
Converter Poles	Piece	7,328	659
Fence Posts	Piece	969,028	5,887
Fuel Wood	Cord	149,467	74,734
Stulls	Piece	6,091	243

a/ Data from U. S. Forest Service, Regional Office, Missoula.

b/ Data:
Poles, Piling, Hewed Ties - 1927-1929-1931-1933
Shingles - 1925 to 1934
Pulpwood - 1927 to 1934
Converter Poles - 1929-1931-1933
Fence posts, fuel wood- From special study made in 1935.

area, on the average, each year during the decade 1931-1940. If each laborer worked 100 days per year, employment would be furnished for 2733 workers. A large proportion of the 2265 farm operators who reported working for pay or income off their farms worked in the forest industry in either logging or milling, and these farm operators averaged 101 days each during the year. Thus, if all of the farm operators who worked for supplementary income were employed in the forests and worked the 101 days reported, there would be 100 days of work per year left for only some 444 workers.

The harvesting and processing of the minor timber products, shown in Table XIV, furnishes some additional employment; but compared with the commercial sawlog production and milling, this is not large. It is estimated that the man hours of employment required for harvesting and processing these minor timber products make up about one and a quarter million man hours, most of which are for fuelwood production, or enough to furnish 100 days of work for about 1560 workers per year. The harvesting of Christmas trees and other minor uses of the forest also furnish some employment.[7]

One of the most important characteristics of employment in the forests in this area is the seasonality of employment. Region I of the U. S. Forest Service, with headquarters at Missoula, is the office which officially administers the U. S. forest lands in the Kalispell-Flathead Subregion. In view of the fact that nearly three-fifths of the commercial forest land of the subregion is contained in national forests, the employment of labor by the Forest Service in the area gives a fairly complete picture of the seasonal character of employment in the forests. Table XV shows the total employment (average number of men and total man hours) by months for various types of labor used in the Cabinet, Flathead, and Kootenai National Forests, which are the three national forest areas included in the four-county area. (Almost the entire area of these three national forests is included in the sub-area.) It can be seen from this table that employment ranges from 110 men and 18,746 man

---

[7] Almost a million Christmas trees were shipped from Lincoln County alone in 1939 to markets as far east as Chicago. This industry bolstered rural incomes to the extent of about $100,000 and provided work for some 500 people during the months of October and November. This employment comes at a time when farm work is usually slack, and Christmas tree production is finding an important place as a source of supplemental cash income in the area. Little is known, however, of scientific management of Christmas tree lands and research is needed to prove the best methods of silviculture, and extension work to get this needed information in the hands of tree producers, if the industry is to be developed and established upon a firm foundation. Already, in many instances, farm woodlots have been stripped of their growing stock. (See an unpublished report, "A Discussion of the Forest Situation in Lincoln County, Montana", prepared by the Northern Rocky Mountain Forest and Range Experiment Station, Missoula, Montana.)

TABLE XV.--EMPLOYMENT BY FOREST SERVICE, KALISPELL-FLATHEAD SUBREGION, CALENDAR YEAR 1940 a/

	January		February		March		April		May		June		July		August		September		October		November		December		Total man hours
	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	Ave. no. men	Man hours	
Manual Trades & Laborers:																									
Cabinet National Forest	6	956	7	855	7	855	8	1,166	126	22,098	165	26,364	265	53,047	240	49,591	146	26,036	64	12,746	19	3,371	2	236	
Flathead National Forest	22	2,992	22	2,998	4	752	16	1,916	120	13,919	526	46,361	3,592	240,556	1,469	118,129	280	23,354	68	10,626	36	4,270	16	2,191	
Kootenai National Forest	6	1,488	9	2,752	15	2,970	14	3,316	154	27,094	245	47,800	850	180,000	276	59,948	276	54,540	137	25,256	70	16,800	7	1,736	
Total	34	5,436	38	6,605	26	4,577	38	6,398	400	63,111	936	120,525	4,707	473,603	1,985	227,668	702	103,930	269	48,628	125	24,441	25	4,163	1,089,085
Sci., Prof. & Field Supervisory:																									
Cabinet National Forest	11	1,736	10	1,580	9	1,416	9	1,504	12	2,232	14	2,464	9	2,471	10	2,500	10	2,000	11	2,200	10	1,610	10	1,650	
Flathead National Forest	12	1,809	11	1,712	11	1,767	11	1,920	11	1,864	11	2,000	11	2,897	10	2,845	10	1,896	10	1,758	10	1,263	9	1,095	
Kootenai National Forest	10	2,480	12	2,784	12	2,976	16	3,676	16	3,968	12	2,880	12	2,880	12	2,976	12	2,880	12	2,976	12	2,880	13	3,235	
Total	33	6,025	33	6,076	32	6,159	36	7,100	39	8,064	37	7,344	32	8,248	32	8,321	32	6,776	33	6,934	32	5,753	32	5,980	82,780
C.C.C. Sup. Personnel:																									
Cabinet National Forest	11	1,936	11	1,936	11	1,936	12	2,112	11	2,123	11	2,123	9	1,800	10	2,500	10	2,000	11	2,200	11	1,980	11	1,888	
Flathead National Forest	19	2,976	16	2,740	21	2,468	21	3,684	21	3,802	21	3,752	21	4,246	19	3,660	20	3,128	20	3,952	23	3,388	19	2,478	
Kootenai National Forest	7	1,736	7	1,624	7	1,736	7	1,680	7	1,736	7	1,680	7	1,680	7	1,736	7	1,680	7	1,736	7	1,680	7	1,636	
Total	37	6,648	34	6,300	39	6,140	40	7,476	39	7,661	39	7,555	37	7,726	36	7,896	37	6,808	38	7,888	41	7,043	37	6,002	85,148
Office Workers:																									
Cabinet National Forest	6	773	5	676	5	754	5	731	7	1,054	9	910	5	1,085	7	1,200	6	1,078	5	905	5	738	4	612	
Flathead National Forest	6	1,002	6	952	6	787	6	825	7	1,222	7	1,280	11	1,856	10	1,703	8	1,318	7	1,188	7	836	7	741	
Kootenai National Forest	11	2,039	9	1,535	9	1,760	9	1,720	10	1,735	9	1,570	9	1,570	7	1,519	6	1,440	6	1,488	6	1,440	5	1,248	
Total	23	3,814	20	3,163	20	3,301	20	3,276	24	4,011	25	3,760	25	4,511	24	4,422	20	3,836	18	3,581	18	3,014	16	2,601	43,290
Totals--All Classes Emp.																									
Cabinet National Forest	34	5,401	33	5,047	32	4,961	34	5,513	156	27,507	199	31,861	288	58,403	267	55,791	172	31,114	91	18,051	45	7,699	27	4,386	
Flathead National Forest	59	8,779	55	8,402	42	5,774	54	8,345	159	20,807	565	53,393	3,635	249,555	1,508	126,337	318	29,696	105	17,524	76	9,757	51	6,505	
Kootenai National Forest	34	7,743	37	8,695	43	9,442	46	10,392	187	34,533	273	53,930	878	186,130	302	66,179	301	60,540	162	31,456	95	22,800	32	7,855	
Grand Total	127	21,923	125	22,144	117	20,177	134	24,250	502	82,847	1,037	139,184	4,801	494,088	2,077	248,307	791	121,350	358	67,031	216	40,256	110	18,746	1,300,303

a/ Data from Monthly Safety Reports.

hours in December to 4801 men and 494,088 man hours in July. The average employment by the Forest Service in these three national forest areas during the three summer months of June, July, and August amounted to 2638 men per month during 1940, compared with an average of less than 120 men per month during the four winter months of December, January, February, and March. It will be noted from Table XV that the greatest variation in employment comes in the number of manual trades and laborers employed, or, in other words, in the unskilled-laborer classification. The number of office workers, supervisory personnel, and scientific and professional workers employed remained much more stable throughout the seasons.

The character of the climate in the Kalispell-Flathead Subregion is such that very little logging and lumbering can be done in the usual winter months. The heaviest employment of labor in the forest industries in this subregion falls in the summer months and provides employment for only a part of the year. The peak employment of labor in the forests usually comes at a time when the employment of labor for farming operations is also at a peak. However, the large number of very small farm units makes it possible for the average farm family to do the chores and necessary work around the farm unit during evenings and weekends without interfering seriously with work during the day in the forests, either in logging or milling.

In addition to providing very seasonal employment for only a part of the year, the lumber industry is characterized by important cyclical fluctuations. Figure 8 shows lumber production by years for the period 1904-1940 in the Northern Rocky Mountain Region. It is believed that the trends in production of lumber of the different species are fairly typical for the Kalispell-Flathead region. (Lumber production for the Kalispell-Flathead region alone were unavailable.) Note from figure 8 the significant declines in production of lumber during years of declining business activity or of severe economic depression. Note particularly the very heavy declines in production associated with the business depression of the early thirties. During such periods, employment in the forest industries of the area is greatly reduced, causing a serious situation of instability and increased relief expenditures.

In addition to these seasonal and cyclical factors causing employment and income instability, the long-time trend of employment in the area is downward because of the short-sighted exploitation of the basic forest resources of the subregion. Except in the national and state forests, methods of cutting have not been adjusted to insure the full potential crop replacement of the most desirable species that are in demand, and continued, successive crops of forest products have not been or are not now a conscious objective of utilization. The quantities cut over in any period have not been and are not now intentionally related to productive capacities, with the idea of sustaining yield, except insofar as the National Forest timber is concerned. Cutting has been gradually forced to the less accessible areas; and logging and, to a less extent, milling require a smaller amount of labor per thousand feet of timber available, because of the increased use of heavy machinery and other operating improvements. These factors have tended to decrease employment in forests in the area.

The present volume of timber on commercial forest land in the subregion is 20,545 million board feet, but only 5,490 million board feet or about a fourth of this total consisted of ponderosa and white pine, which are the species that make up the backbone of the lumber industry. Over the past ten years, these two species have made up approximately 55 per cent of the total cut of sawlogs. In the later years of the period, the proportion has been higher. Without new uses, extension of markets, or more favorable freight tariffs permitting lower consumer prices, there is little prospect of increasing the consumption of the less used species, at least for quite a number of years in the future.[8]

With proper planning and land use control, it is possible to increase appreciably the employment possibilities in the forest resources of the area. R. K. Winters, in charge of the Division of Forest Survey of the Northern Rocky Mountain Forest and Range Experiment Station at Missoula, states that "From such fragmentary data as are now at hand in summarized form, it appears that the sustainable cut of all species may be double the present cutting drain of all species for all uses (lumber, fuelwood, railroad ties, fenceposts, etc.); assuming that future processing of these forest products will require approximately the same amount of labor per unit produced as the present processing procedure, this would mean that the potential employment in forest industries might be doubled if all species were fully marketable. With respect to ponderosa pine and white pine, which make up 40 per cent of the cut, the situation is different, however. The present cut of these species is at least 30 per cent greater than can be sustained. This means that unless the species now marketable only to a limited extent become marketable, a decline in the employment in forest products industries can be expected."[9]

The consequences of the exploitation of the basic forest resources are summed up in the following chronological statement concerning the result of forest liquidation in the Eureka area (in Lincoln County):

---

[8] This statement is made in a general statement prepared for the authors by the Northern Rocky Mountain Forest and Range Experiment Station, Missoula, Montana.

[9] A statement contained in a letter dated June 10, 1941, from R. K. Winters to the authors.

1893 -- About twelve families in ranch homes north of the present townsite of Tobacco Plains.
1904 -- First train on the Great Northern through Eureka. Population 300.
1907 -- Eureka Lumber Company shipping 25 million feet of lumber annually.
1909 -- Boom times; Eureka incorporated as a town; population 602.
1914 -- Eureka Lumber Company mill burned. A bigger mill erected and the cut increased to around 45 million feet per year.
1917 -- Peak of forest liquidation. Annual cut 60 million feet.
1919 -- P. L. Howe Lumber Company succeeded Eureka Lumber Company. Dwindling accessible timber supply, falling lumber prices, financial difficulties.
1920 -- Population 1800.
1922 -- Brooks-Scanlon Lumber Company succeeds P. L. Howe Lumber Company.
1924 -- Mill cut last log and was dismantled for use elsewhere.
1925 -- Timber gone; mill gone; jobs gone; land idle; depression starts for Eureka. Population 1000.
1934 -- Super-depression; population 860; 126 families on relief.

The same fate is in store for the town of Libby unless the facts are squarely considered and appropriate action taken to forestall or mitigate this eventuality.[10]

The watershed attributes of the forest area are of great importance in Lake County, where a substantial part of the agriculture depends upon irrigation. Irrigation is also a vital necessity in the small farm territories in Sanders and Lincoln Counties. One large power project below Flathead Lake obtains flow control primarily from the lake, but several other proposed important projects higher upstream are wholly dependent upon natural water flows of streams.

Forest ranges are of more than incidental importance in only a few districts in which stockgrowing is a predominant activity.

---

[10] This chronological statement is taken from "A Discussion of the Forest Situation in Lincoln County, Montana", unpublished report of the Rocky Mountain Forest and Range Experiment Station, Missoula, p. 2 and 3. The statment indicates that the economy of Lincoln County will always be predominantly a forest economy, and the extent to which this basic resource will contribute to the well-being and happiness of the people depends on how they use it. This statement applies to Sanders County and a large portion of Flathead County, but less so to Lake County which has more agricultural land in comparison with its total area than the other three counties.

Outside of the national forest areas, the forest range has been appreciably deteriorated from the original range, both on the open grassland and on the non-national forest rangeland. The number of permits on the Cabinet, Flathead, and Kootenai National Forests totaled 271 in 1940, covering 3875 cattle and horses for 14,051 animal months, and 11,630 sheep for 40,585 animal months. Prevention of further deterioration of the range in non-national forest areas, and improving it, are very desirable contributions to the improvement of public welfare in the area.

Recreational attractions of the forest lands are particularly important contributions to local public welfare. Location near Glacier National Park, in the northwest corner of Montana, has an important recreational value, especially for Flathead, Sanders, and Lincoln Counties. At present, recreational values are not fully exploited because of comparative inaccessibility to the main highways of east-west travel, and because of comparatively poor highway facilities in the area, especially in Lincoln County. There are several wilderness and wild areas in the national forests of the subregion which have been ordered held in the primitive state for recreation; and Flathead Lake, which is one of the largest bodies of fresh water in the continental United States, is a center of attraction, as are also several other small lakes in this district. One of the largest herds of elk in the nation is in this district, and a heavy population of deer, as well as smaller numbers of other game animals, persist in the northwestern part of this subregion. Fishing in this area remains as some of the best in the Northwest.

Mining. -- Although the four-county area has a considerable variety of mineral deposits, mining does not comprise a very important part of the activity in the area at present. According to the most recent compilation available, there are less than 300 men regularly employed in mining in this subregion.[11]

The largest operating mine in the four-county area is the Jack Waite Mining Company, in Sanders County. The property which this company operates is situated in both Idaho and Montana, about 31 miles north of Wallace, Idaho, near Duthie. This company produces about 200 tons per day of lead-silver-zinc ore which is milled in an all-flotation plant of 300 tons daily capacity. It employs 100 men.

---

[11] The "Directory of Montana Mining Properties" issued by the Montana School of Mines as Memoir No. 20, May 1940, attempts to show the location, operations, equipment and employment of the operating mines of the state. However, many did not report the number of men employed or indicate intermittent employment. Thus, it is difficult to arrive at an accurate estimate of employment in operating mines. However, the operating mines that did report the number of men employed in 1940 totaled 269, and since all the larger operating mines reported their employment, it seems likely that at least not over 300 men are employed altogether. There is, of course, some individual placer mining and individual mine operating units, but only a very small number of men are engaged in these.

The next largest mining company in the area is the Flathead Mine, in Flathead County, which produces from 30 to 40 tons of silver ore per day, which is shipped to the Washoe smelter, and from 40 to 50 tons of lead-silver ore per day, shipped to the East Helena smelter. This plant employs 50 men. In Lincoln County, there are numerous operating mining companies, but the biggest one is the Universal Zonolite Insulation Company near Libby, which produces about 500 tons of vermiculite mica ore per day by open-cut mining. The mica is milled and about 200 tons of concentrates produced per day. This is practically a new industry, the uses for the product having been developed in the last fifteen years. The company employs 27 men. The Branagan Mine in Lincoln County employs 25 men and is engaged in gold mining. The plant expects to build up to a capacity of about 100 tons per day of gold ore. The Morning Glory Mines, Inc., situated in Lincoln County, produces 40 tons of gold ore per day, which is milled in an amalgamation and gravity concentration plant. This company employs 18 men.

There are numerous other operating mining companies in the four-county area, but at present none of them is employing as many as fifteen men. Table XVI gives a brief summary, by counties, of the operating mines in the Kalispell-Flathead Subregion, as reported to the Mineral Resources Survey of the Work Projects Administration and listed in Memoir No. 20 of the Montana School of Mines' "Directory of Montana Mining Properties". It can be seen from this table that there are numerous mines in the area, which have operated in the past, which are not now operating or which are now operating at only part capacity. The Kalispell-Flathead Subregion undoubtedly has important mineral deposits, some of which are not now known; at least, the geology of the area indicates this. Just how extensive mining operations can become and how important these operations will be as a factor in stabilizing employment and incomes in the area will depend largely upon the market demand for the various minerals located in the subregion. Many of the deposits are not rich ore bodies, and mining costs are relatively high. However, it appears that there is a fairly good market for the vermiculite which is being produced, and other deposits, such as tungsten, may become commercially profitable. However, at present the lead-zinc-silver mining and gold mining seem to be the most profitable, and the deposit of platinum in the southeast corner of Sanders County is not being commercially exploited.

Summarizing the mining resources of the subregion, it may be said that there are only a few good-sized mines in the area, the others being small and undependable. Some of these may form the basis of a few small communities, but unless unforeseen developments

TABLE XVI. Mining Properties as of November 1939 in the Kalispell-Flathead Subregion a/

Name of Mine	Operating or closed	Mineral Mined	No. employed at present	No. usually employed
Flathead County				
Bergman & Murphy	Closed	Gold, silver, lead	0	-
Dan Grant Mining Co.	Operating	Silver	3	3
Flathead Mine	Operating	Silver, lead	50	50
Grant Mine	Closed	Gold, silver, lead	1	-
North Fork Coal Co.	Operating	Coal	-	-
Reser Mining Co.	Operating	Silver	1	2
Lake County				
No mines reported				
Lincoln County				
Branagan Mines	Operating	Gold	25	-
Condor Mining & Leasing Co.	Operating	Placer gold	3	3
Davis & White Mining Co.	Closed	Placer gold	0	4
Giant Sunrise Mining Co.	Closed	Silver, lead, zinc	-	-
Glacier Silver, Lead Mining Co.	Operating	Gold, silver, lead	11	25
Granite Creek Mining Co.	Closed	Silver, lead	0	4
Haywire Mining & Milling, Inc.	Closed	Gold, silver	2	10
Iron Mask Lead Mining Co.	Closed	Lead, zinc	0	-
Liberty Metals Co.	Closed	Gold, silver, zinc lead, copper	-	-
Mecca Mining Co.	Closed		-	-
Midas Gold Mining & Milling Co.	Closed	Gold, silver, lead, copper, tungsten	0	25
Morning Glory Mines Inc.	Operating	Gold	18	18
Rex Mine	--	Gold, silver, lead	--	—
Troy Mines Co.	Closed	Silver, lead, zinc	0	170
Universal Zonolite Insulation Co.	Operating	Vermiculite	27	27
Sanders County				
Ambassador Mines Corp.	Closed	Gold, silver lead, zinc	0	9
Apex Mine	Closed	Gold	-	-
Blue Creek Mining Co.	Closed	Silver, lead, zinc	-	20
Columbus Mining Co.	Closed	Gold, silver, copper	-	-

TABLE XVI. Mining Properties as of November 1939 in the Kalispell-Flathead Subregion a/ (Continued)

Name of Mine	Operating or closed	Mineral Mined	No. employed at present	No. usually employed
Copper Mask Mining Co.	Operating	Silver, copper	3	3
Dixon Copper Co.	Closed	Gold, copper	0	6
Gold Lode Mining Co.	Operating	Gold	5	5
Green Mountain Mining Co.	Operating	Gold, silver copper, platinum	11	11
Heidelburg Mining Co. of Mont., Inc.	Closed	Gold, silver	0	8
Herman Mine	Closed	Silver, lead, copper	-	-
Homestead Mining Co.	Closed	Silver, lead zinc, copper	-	-
Jack Waite Mining Co.	Operating	Silver, lead, zinc	100	100
Montana Premier Gold Mining Corp.	Closed	Gold, silver, lead	-	-
Vermilion Metals Co.	Closed	Gold, silver, lead	0	15
Total No. of Mines - 35	No. of Mines Operating - 13		260	518

---

a/ Data from "Directory of Montana Mining Properties"; Work Projects Administration, Mineral Resource Survey, Montana School of Mines, Butte, May, 1940.

in expanded market demand for the various minerals available in this area occur, mining will not form an important part of the employment pattern of the subregion.

Manufacturing. -- The 1939 Census of Manufactures shows 83 manufacturing establishments in the subregion, of which 46 are located in Flathead County, 16 in Lake County, 12 in Lincoln County, and 9 in Sanders County. The number of wage earners in these 83 manufacturing establishments averaged 1478 for the year. This figure includes full-time employees and part-time employees.

Table XVII shows the number of manufacturing establishments, number of wage earners, wages paid, value of products, and valued added by manufacture, by counties and for the subregion as a whole, for the years 1935, 1937, and 1939. It can be seen from this table that the number of manufacturing establishments in the subregion has been increasing appreciably since 1935, although the number of wage-earners employed was less in 1939 than in either 1937 or 1935. This indicates that the manufacturing establishments are very small sized, and that a considerable number of relatively small operating units have been established in recent years.

The manufacture of forest products accounts for the largest part of the total manufacturing establishments, 29 or 44 per cent of the 66 manufacturing establishments in 1935 being in this group. Lumber and timber products not classified accounted for 26 of these 29 establishments, wood-preserving plants two, and planing-mill products the rest. The second largest group of manufacturing establishments is food and kindred products, totaling 22 plants or one-third of the total manufacturing establishments. Of this number, 8 are creameries, 7 bakeries, 3 flour mills, and one each of nonalcoholic beverages, feed mills, liquor, and sausage-making. There are 11 printing and publishing plants in the subregion, nine of which publish newspapers and periodicals and two general job printing. There is one petroleum-refining plant in the subregion, one plant manufacturing clay products, one cut stone, and one railroad repair shop (see Table XVIII).

It can be seen from the above data that manufacturing does not employ a large number of wage-earners in this subregion. It will also be noted that there are no canning plants in the area for canning fruits or vegetables, and no sugar beet factories. The climate of this region is not conducive to profitable sugar beet production, at least with present producing techniques and yields. However, many feel that there is a very definite need for at least one canning establishment to can fruits and vegetables produced in the

TABLE XVII.--Manufacturing, Kalispell-Flathead Subregion a/

County	Year	No. of establishments	Wage earners (Average/ year)	Wages	Value of Products	Value added by Manuf.
Flathead	1939	46	765	850,085	3,697,864	1,725,178
	1937	38	964	1,069,070	3,688,794	1,929,250
	1935	41	932	982,624	3,274,040	1,612,532
Lake	1939	16	94	93,228	669,139	227,298
	1937	13	160	158,992	733,510	243,904
	1935	8	72	53,497	373,497	102,644
Lincoln	1939	12	524	-- b/	-- b/	--b/
	1937	17	635	-- b/	-- b/	--b/
	1935	9	434	-- b/	-- b/	--b/
Sanders	1939	9	95	169,749	742,199	263,211
	1937	9	192	253,869	991,688	514,317
	1935	8	126	124,786	669,164	253,664
Total	1939	83	1,478	1,113,062	5,109,202	2,215,687
	1937	77	1,951	1,481,931	5,413,992	2,687,471
	1935	66	1,564	1,160,907	4,316,701	1,968,840

a/ Data from census of Manufacturers 1937 & 1939.

b/ Data withheld to avoid disclosure.

TABLE XVIII. Types of Manufacturing, Kalispell-Flathead Subregion, 1935 a/

	Total	Flathead	Lake	Lincoln	Sander
Total All Types	66	41	8	9	8
Food & Kindred Products-Total	22	12	4	3	3
Beverages, non-alcoholic	1	1	-	-	-
Bread	7	4	2	1	-
Butter	8	4	1	1	2
Feeds	1	1	-	-	-
Flour	3	1	1	-	1
Liquors	1	1	-	-	-
Sausage, meat, puddings, etc.	1	-	-	1	-
Forest Products - Total	29	18	2	5	4
Lumber & timber products not classified	26	16	2	5	3
Planing mill products	1	1	-	-	-
Wood preserving	2	1	-	-	1
Printing & Publishing	11	7	2	1	1
Printing & publishing: Book, Job.	2	2	-	-	-
Printing & publishing: Newspaper and periodical	9	5	2	1	1
Products of Petroleum and Coal	1	1	-	-	-
Petroleum refining	1	1	-	-	-
Stone, Clay & Glass Products	2	2	-	-	-
Clay products and non-clay refractories	1	1	-	-	-
Stone, cut and shaped	1	1	-	-	-
Railroad Repair Shops	1	1	-	-	-
Railroad repair shops, steam	1	1	-	-	-

a/ Data from Holleran, O. C. "Industrial Market Data Handbook", U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, Domestic Commerce series No. 107, Washington, 1939.

area.[12] If a commercial canning plant could not be established, it might be possible through a community work center to operate a small canning plant to furnish canned fruits and vegetables for the cooperating families in the subregion, so that they would need to lay out less of their comparatively meager annual earnings for canned foods during the seasons of the year in which fresh fruits and vegetables are not available in this area.

Distribution. -- There are 57 wholesaling establishments and 606 retail stores in the Kalispell-Flathead Subregion, according to the 1935 Census of Business. The 57 wholesaling establishments employ 124 workers, on an average (including both full-time and part-time employees), while the 606 retail stores employ an average of 1135 workers. Table XIX shows the number of wholesale establishments, the volume of net sales, the number of active proprietors, the employees, and the total payrolls, by counties, and gives the total for the subregion. Table XX shows similar data for retail stores.

It can be seen from the data in these two tables that the average of these wholesaling and retailing units is relatively small, and many of them are typical service stores, or wholesaling establishments in towns servicing rural communities. A considerable proportion of the wholesaling for the subregion is done from Missoula.

Transportation. -- The subregion is serviced by two railroads -- the Great Northern, running through the northern part of the subregion in Flathead and Lincoln Counties, and the Milwaukee, running the length of Sanders County, east and west, with a spur line up to Polson in Lake County (see figure 9).

The roads of the subregion are shown in figure 9. It will readily be seen from this figure that the roads running east and west, as well as those running north and south, are inadequate in certain sections of the subregion. The entire northern half of the subregion lacks any true east-west highway, and aside from the highway from Eureka to Whitefish, Kalispell, Polson, and on

---

[12] The Farm Security supervisor in Flathead County, in making his Annual Progress Report in 1940 to the State Farm Security Director, stated in a discussion of the possible development of additional manufacturing establishments to stabilize employment and income in the area: "Most of all there is need for canning equipment capable of turning out 100,000 or more cans of food each season. This would only be an average of some 300 cans per family." (See p. 33 of the typewritten report on annual progress of the Flathead Readjustment Project, on file in the office of the State Director of the Farm Security Administration of Montana, at Bozeman, Montana.)

TABLE XIX.--Wholesale Establishments, Kalispell-Flathead Subregion, 1935 a/

	No. of Establishments	Net Sale (Add 000)	Active Proprietors	Av. Employees, full & part-time	Total pay rol (add 00
Flathead	17	$ 1870	4	54	$ 79
Kalispell	11	1715	2	48	73
Remainder	6	155	2	6	6
Lake	18	826	2	45	63
Lincoln	8	182	-	10	16
Sanders	14	274	3	15	16
Total - 4 counties	57	3152	9	124	174

a/ Data from Census of Business, 1935, Vol. III, Wholesale Distribution.

b/ Does not include pay of proprietors in unincorporated businesses.

SCHOOLS AND ROADS, 1939, FLATHEAD COUNTY

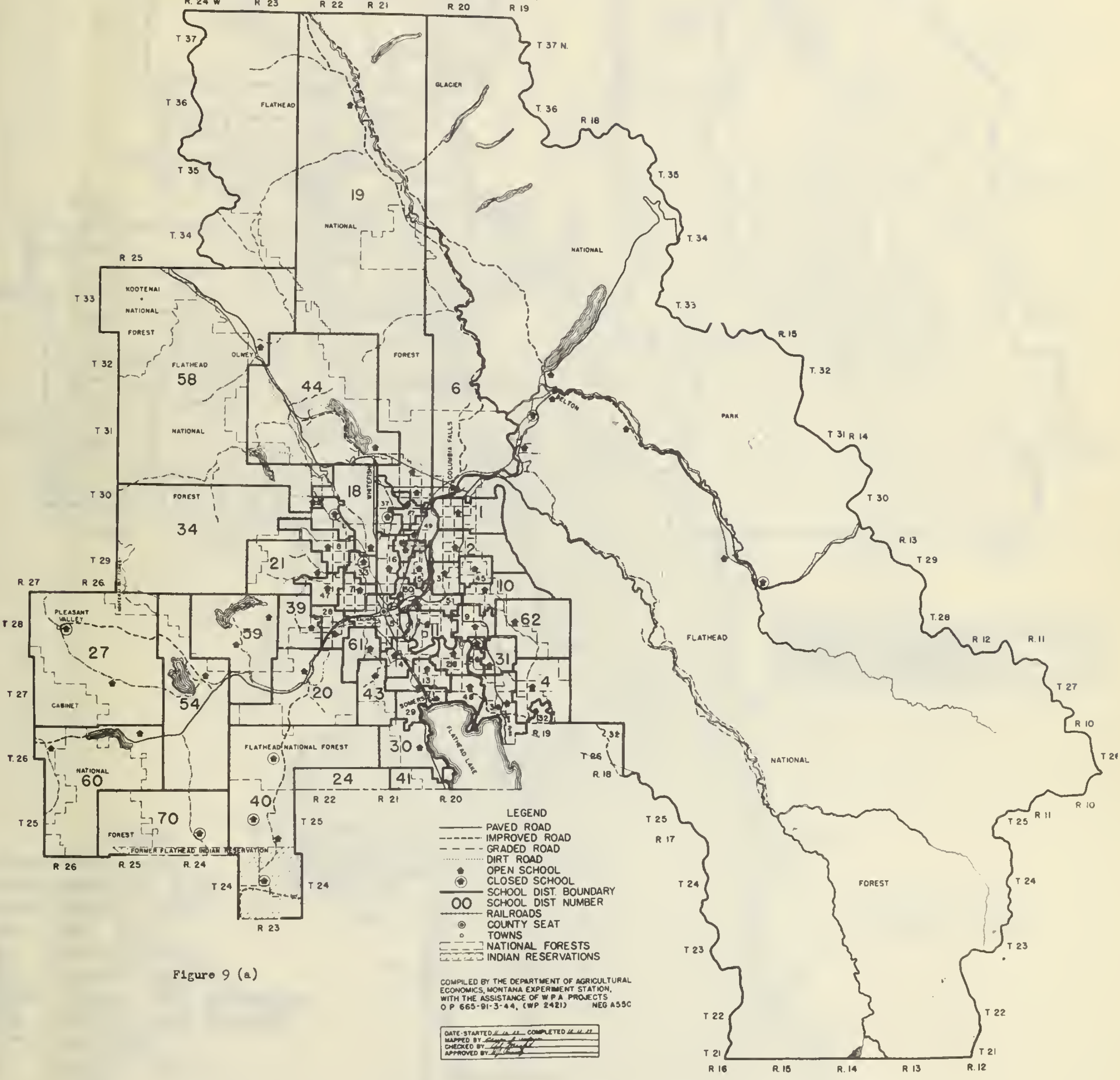
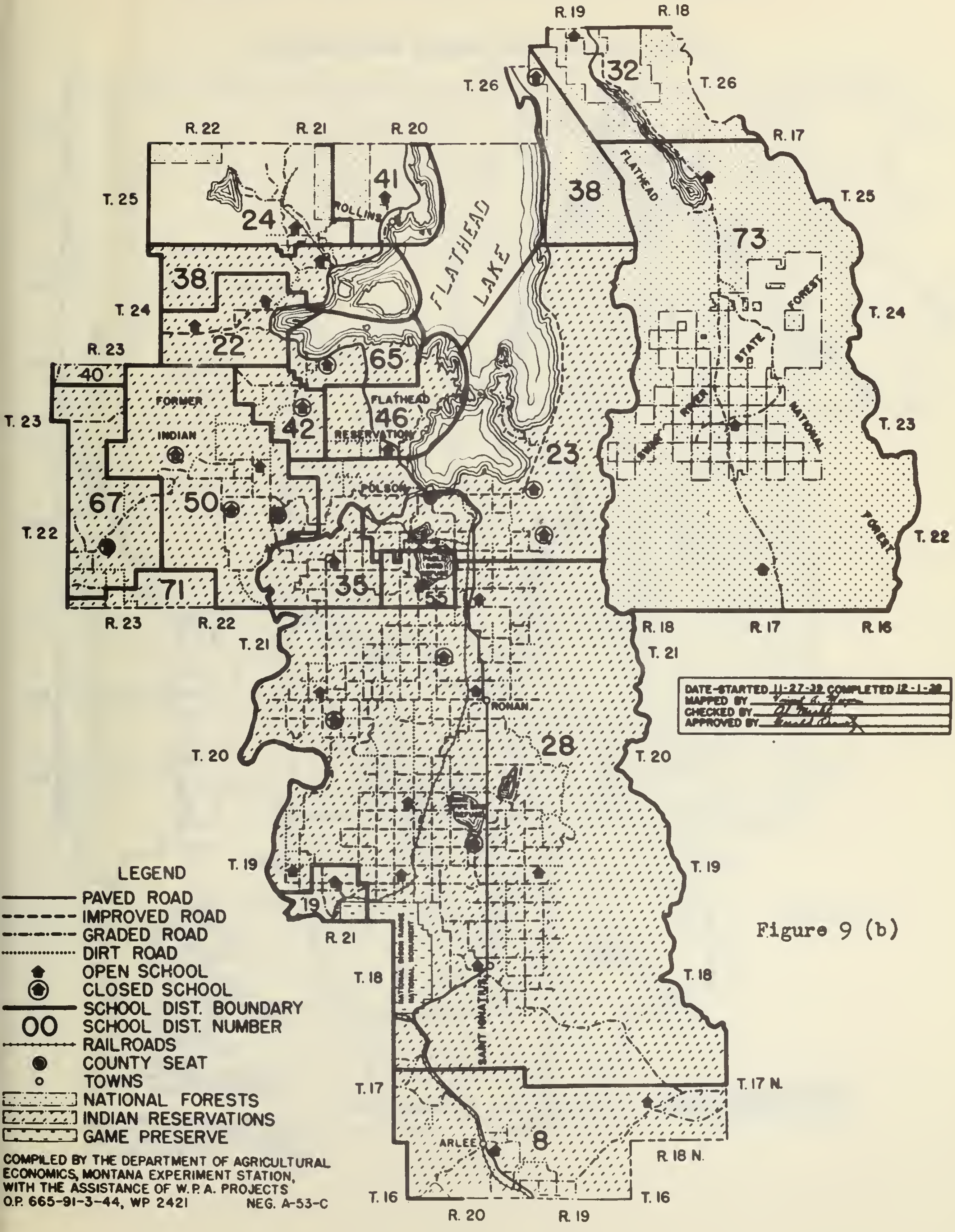


Figure 9 (a)

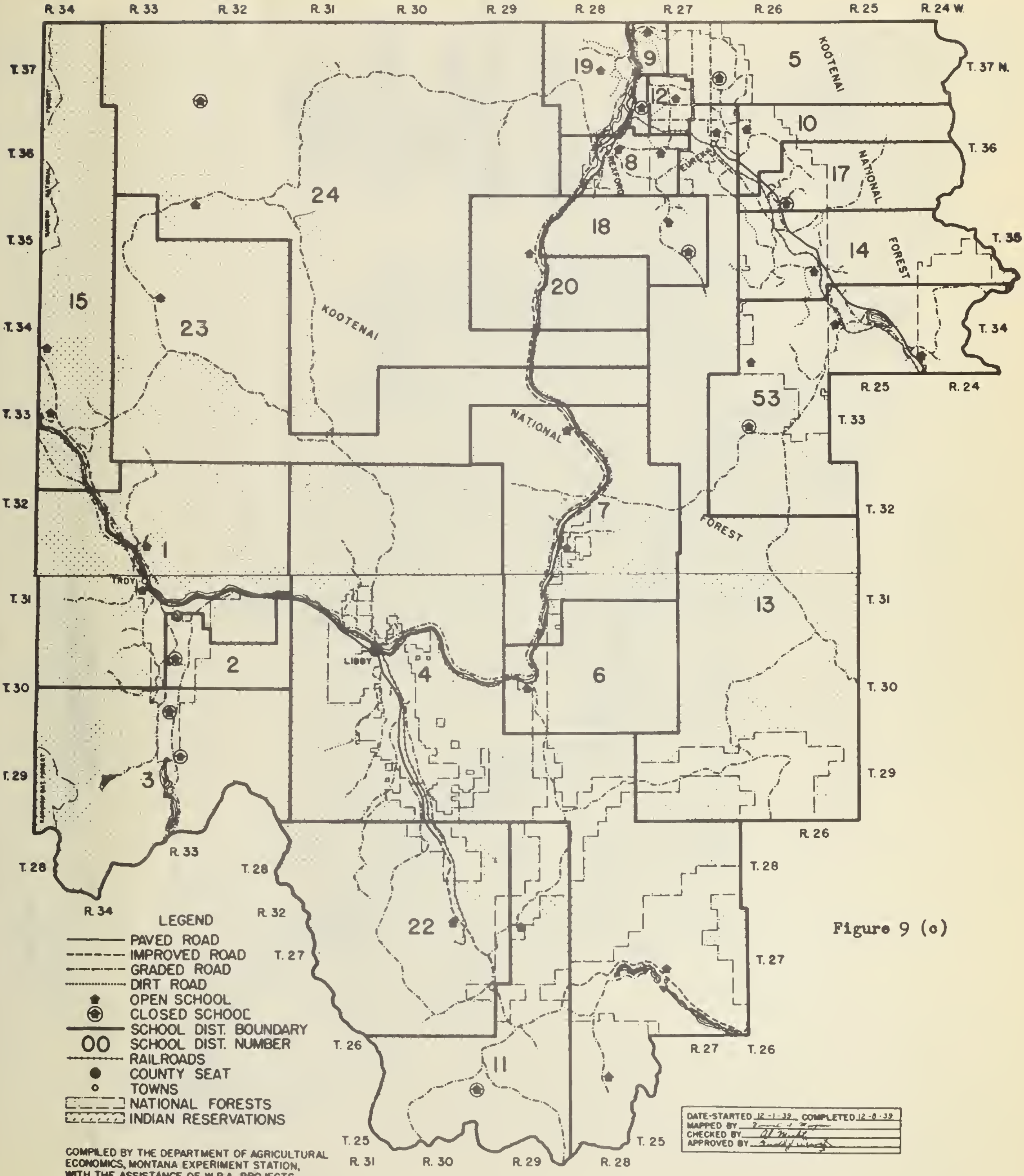
SCHOOLS AND ROADS 1939, LAKE COUNTY



COMPILED BY THE DEPARTMENT OF AGRICULTURAL ECONOMICS, MONTANA EXPERIMENT STATION, WITH THE ASSISTANCE OF W.P.A. PROJECTS O.P. 665-91-3-44, WP 2421 NEG. A-53-C

Figure 9 (b)

SCHOOLS AND ROADS, 1939, LINCOLN COUNTY



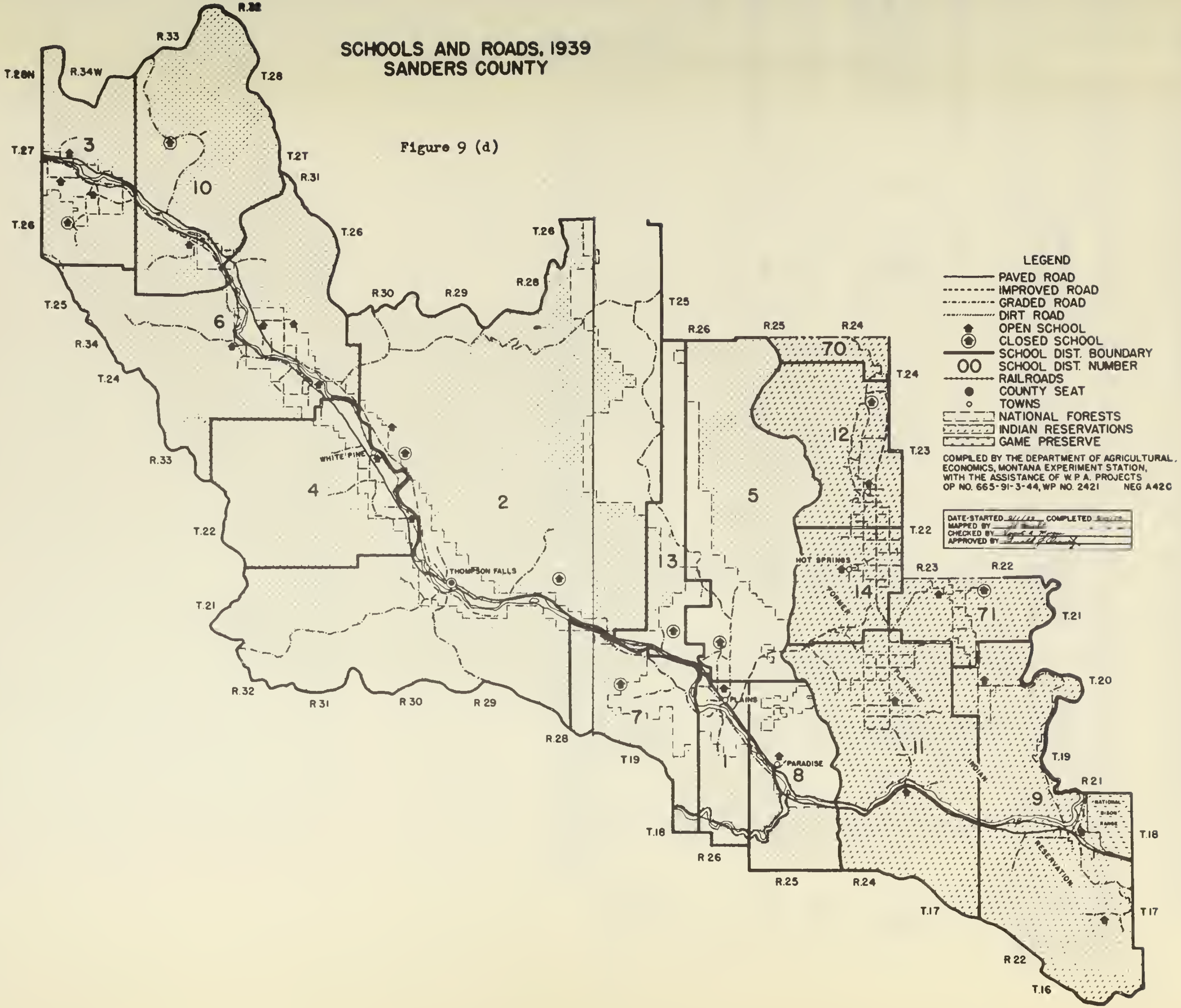
COMPILED BY THE DEPARTMENT OF AGRICULTURAL
ECONOMICS, MONTANA EXPERIMENT STATION,
WITH THE ASSISTANCE OF W.P.A. PROJECTS
O.P. 665-91-3-44, WP 2421 NEG. A-64-C

DATE-STARTED 12-1-39 COMPLETED 12-8-39
MAPPED BY
CHECKED BY
APPROVED BY

Figure 9 (c)

SCHOOLS AND ROADS, 1939
SANDERS COUNTY

Figure 9 (d)



COMPILED BY THE DEPARTMENT OF AGRICULTURAL ECONOMICS, MONTANA EXPERIMENT STATION, WITH THE ASSISTANCE OF W.P.A. PROJECTS OP NO. 665-91-3-44, WP NO. 2421 NEG A42C

TABLE XX.—RETAIL ESTABLISHMENTS, KALISPELL-FLATHEAD SUBREGION, 1935 a/

	Number of stores	Sales (add 000)	Proprie-tors	Employ-ees	Total payroll (add 000)
		(dollars)			(dollars)
Flathead County	271	7,561	247	674	704
Kalispell	135	5,478	130	492	531
Whitefish	158	1,139	50	104	107
Remainder	78	944	67	78	66
Lake County	138	1,664	124	224	199
Lincoln County	97	1,598	91	139	125
Sanders County	100	1,190	100	98	78
Total, 4 counties	606	12,013	562	1,135	1,106

a/ Data from Census of Business 1935, Vol. II, Retail Distribution.

to Missoula, there is no through all-weather north and south highway. The east-west highway from Kalispell to Libby on to Troy and to Bonner's Ferry in Idaho, (U. S. No. 2) has various sections which are not in good repair. Highway 10a, running east and west through Sanders County, is a good highway. The lack of better highway facilities in the northwestern portion of the subregion is a definite hindrance to the development of the recreational land-use possibilities of the area. A planned program of public works in the area could well include a considerable allocation for improvement and maintenance of highways.

Government. -- In the four counties which comprise the Kalispell-Flathead subregion, there are, as has been noted, 12 incorporated cities and towns and 106 school districts. In 1939, there were 119 schools operating in the four counties, compared with 130 operating schools in 1933. The total number of closed schools in 1939 was 40, compared with 21 in 1933. Figures 9a, 9b, 9c, and 9d show for Flathead, Lake, Lincoln, and Sanders Counties, respectively, the school district boundaries, the operating and closed schools, the cities and towns, power transmission lines, railroads, and highways, as of 1939.

Lake County operates a large consolidated school district (No. 28) which contains several operating schools, although most of the districts in the rest of this county and in the other three counties are one-school districts. With this decentralized method of school administration and support, appreciable inequalities in tax burdens and educational opportunities arise. For example, in 1940, school district levies in Lake County varied from no mills in District 42 to 24 mills in District 28; in Lincoln County, from 4 mills in District 5 to more than 30 mills in District 13; in Flathead County, from no mills in District 33 to more than 26 mills in District 44; and in Sanders County from no mills in District 5 to 26 mills in District 12.

Financial Condition of Local Governmental Units. -- For the most part, local governmental units in the subregion are in relatively good financial condition. Flathead County has a total net indebtedness for the county of less than $8 per thousand dollars of taxable valuation. Lake County has approximately $15, Lincoln County $23, and Sanders County only 61 cents indebtedness per thousand dollars of taxable valuation. (All figures are as of June 30, 1940.) County government net indebtedness has declined approximately one and a quarter million dollars in the subregion during the period 1923-1940. The net indebtedness of school districts has declined slightly during the same period, while the indebtedness of drainage and irrigation districts has declined $130,000. Heavy expenditures of the Federal Government through its relief and agricultural adjustment programs have enabled the local governments of the subregion to operate their various services without any appreciable increase in taxes, at the same time

p

paying off a considerable portion of their indebtedness. However, some school districts in the subregion are making relatively high levies for the support of their schools, and some of them have heavy indebtedness which they are trying to liquidate through additional mill levies.

All but one of the four county governments in the subregion (Sanders) have total millage levies exceeding the average total millage levy for the state as a whole. In 1940, the average state millage levy was 62.45 mills, whereas in Flathead County the total tax millage levy on general property was 63.7 mills. In Lake County, the total millage was 75.4 mills; in Lincoln County, 71.3 mills; but in Sanders County (the only one to have a total millage levy below the state average) the levy was 59.8 mills. The large taxable valuation of railroad property in Sanders County may be a partial explanation for the lower levies in this county. It can be seen from these data that property tax levies in the subregion are relatively high. These comparatively high levies reflect the increased burdens placed upon local governmental units in recent years to render services to the increasing numbers of stranded and migratory farm families migrating into the area who have needed and received local governmental services considerably in excess of the increased taxable wealth or support of the costs of these services which they have added to the taxable wealth of the area by their influx. This is another way of saying that the migration in represented a forced migration lacking the economic opportunities for expansion of income-producing property characteristic of the earlier voluntary migrations westward in response to the enticing economic opportunities which were then available.

The above millage levies include tax levies for all purposes -- state, county, and school district -- exclusive of cities and towns.

III

Evidences of Maladjustments, or Economic Difficulties

The preceding analysis of the basic natural resources of the area and the patterns of occupance which have been superimposed upon these basic natural resources in the Kalispell-Flathead Subregion reveals certain situations which give rise to important economic difficulties in the area. Some of the symptoms that are the signs of serious economic difficulties can be seen from the property tax delinquency in the area and the public assistance load.

Tax Delinquency. -- More than a fourth of a million dollars of delinquent property taxes were outstanding in the four-county area on June 30, 1940. The amount of total tax delinquency has remained fairly stationary since 1933, but the current delinquency is considerably above the 1932 level ($257,000 compared with

$171,000) and much greater than the predepression level.

However, accumulated tax delinquency is relatively low in the subregion compared with the average for the state, amounting to 4.0 per cent of the taxable valuation of the four-county area, compared with 9.1 per cent for the state as a whole. In only one (Lake) of the four counties does the total accumulated tax delinquency in per cent of taxable valuation exceed the state average (12.4 compared with 9.1). The accumulated tax delinquency in the other 3 counties is relatively low, being only 4.0 per cent for Flathead County, 1.5 per cent for Lincoln County, and 1.0 for Sanders County.[13/]

Public Assistance. -- An average of between 1800 and 1900 people have received public assistance in the four-county area during the past two years. In March, 1941, there were 1897 cases receiving some form of public assistance (WPA, aid to needy blind, aid to dependent children, general relief, old age assistance, and some Farm Security grants). The average amount of public assistance amounted to $22.45 in March, 1941, and during the past two years has averaged around $20 per case per month.

Total WPA expenditures through March 31, 1941, amounted to nearly 5 million dollars for the four-county area ($4,859,000). More than 3 million dollars ($3,067,803) have been spent by the WPA through March 31, 1941, in Flathead County alone. Of this, nearly 5 million dollars of total WPA expenditures, $1,058,000, or slightly over a fifth (21.7 per cent), represents sponsor's contributions.[14/]

The principal types of projects upon which WPA expenditures have been made are: Highways, roads, and streets, which secured on an average more than 59.5 per cent of the total WPA funds spent in the four-county area; recreational facilities, excluding buildings, which secured 10.95 per cent; sewing projects (3.74 per cent), publicly owned or operated utilities, including water purification and supply and sewage collection and disposal, (10.5 per cent); sanitation, (.9 per cent); conservation -- land and water -- (2.33 per cent); and other miscellaneous projects. It can be seen that only a relatively small portion of these total WPA funds have been spent in a way which has increased the productive capacity of the basic natural resources of the area. Most of the projects undertaken have been designed to give employment to take up the slack

---

[13/] These data on total accumulated tax delinquency are as of June 30, 1938, and are taken from Appendix Table VII of "Preliminary Report on Development of Economic Opportunities in Montana for Migratory and Stranded Families", Montana State Planning Board, Helena, Montana, October, 1939.

[14/] Data secured from Mr. W. T. Beaumont, Statistician, Work Projects Administration, Butte, Montana.

periods of low private employment.

Total public assistance in the four-county area during the thirties has been less than the average for the state, in terms of per capita expenditures. The total per capita public assistance (county poor funds, state public welfare expenditures for direct relief, WPA, CWA, FERA, Montana Relief Commission expenditures, PWA grants, and Farm Security Administration grants) amounted to $188.51 in Flathead County, $133.37 in Lake County, $118.66 in Lincoln, and $225.15 in Sanders for the years July 1, 1932 to June 30, 1939, inclusive. The corresponding per capita expenditures for the state as a whole amounted to $208.54. Consequently, Sanders County is the only one of the four counties in the subregion with per capita public assistance expenditures in excess of the state average. Similar expenditures in Lake and Lincoln Counties were much below the state average, and in Flathead were appreciably below. (See Table XXI.)

Unemployment. -- Figure 10 shows the number of unemployed individuals in the active files of the Montana Unemployment Compensation Commission, by months, January 1935 to May 1941, for the four-county Unemployment Compensation Commission offices located at Kalispell, Polson, Thompson Falls, and Libby. It can be seen from this figure that there is a distinct trend of seasonal unemployment in the area, reaching the peak in the early spring months and reaching a low point in the late summer months, as a general rule. This reflects the seasonal character of employment associated with forest industries in the area analyzed above. This seasonal unemployment is reflected also by the amount of benefit payments made to registered individuals unemployed during the six quarterly periods from July 1939 to January 1, 1941, for which data from the Montana Unemployment Compensation Commission are available (see Table XXII). It can be seen from Table XXII that benefit payments of the Unemployment Compensation Commission amounted to $150,437 during the quarter January-March, 1940, compared with only $21,563 benefit payments for the July-September quarter of the same year. The table shows that there is a definite tendency for unemployment to be greatly increased during the winter months, and relatively lowest during the summer months.

A survey of the stranded and migratory farm families in the state in the spring of 1939 showed 1150 in Flathead County, 450 in Lake County, 30 in Lincoln, and 250 in Sanders, or a total of 1880 (39.4 per cent) of the total farm operators (1935 census) in the four-county area. This percentage compares with an average of 18.6 per cent for the state as a whole, indicating the large influx of farm families, from the drouth stricken areas of the Plains, who

TABLE XXI.--RELIEF EXPENDITURES IN KALISPELL-FLATHEAD SUBREGION, JULY 1932-JUNE 1939 a/

	County 1932-37 b/	County and state 1938 and 1939 c/	W.P.A. d/	C.W.A. e/	F.E.R.A. & M.R.C. f/	P.W.A. grants g/	F.S.A. grants h/	Total expenditures	1930 Population	Per capita expenditures
	(dols)	(dols)	(dols)	(dols)	(dols)	(dols)	(dols)	(dols)		(dols)
Montana total	5,567,387	3,038,006	50,628,096	6,007,235	20,031,328	12,582,209	14,245,045	112,099,306	537,544	208.54
4 county total	443,336	202,778	3,673,024	354,788	1,076,525	610,401	653,848	7,014,700	41,522	168.94
Flathead	192,150	99,917	2,206,698	182,885	552,882	279,535	105,413	3,619,480	19,200	188.51
Lake	50,361	39,646	505,020	77,326	274,766	113,100	212,251	1,272,470	9,541	133.37
Lincoln	125,969	41,316	347,010	49,642	127,198	145,800	4,274	841,209	7,089	118.66
Sanders	74,856	21,899	614,296	44,935	121,679	71,966	331,910	1,281,541	5,692	225.15

a/ Data from "Development of Economic Opportunities in Montana for Migratory and Stranded Families", Montana State Planning Board, Helena, October 1939, Mimeographed.

b/ Compiled from County Clerk and Recorder's Annual Reports.

c/ Compiled from County Clerk and Recorder's Annual Reports and from State Department of Public Welfare Expenditures.

d/ From State W.P.A. Statistician.

e/ Compiled from data furnished by the National Emergency Council.

f/ From data compiled by State Department of Public Welfare.

g/ Compiled from data furnished by the Federal Emergency Administration of Public Works.

h/ Estimated expenditures based on number of emergency grants by counties during 1938 and total grants to June 30, 1939.

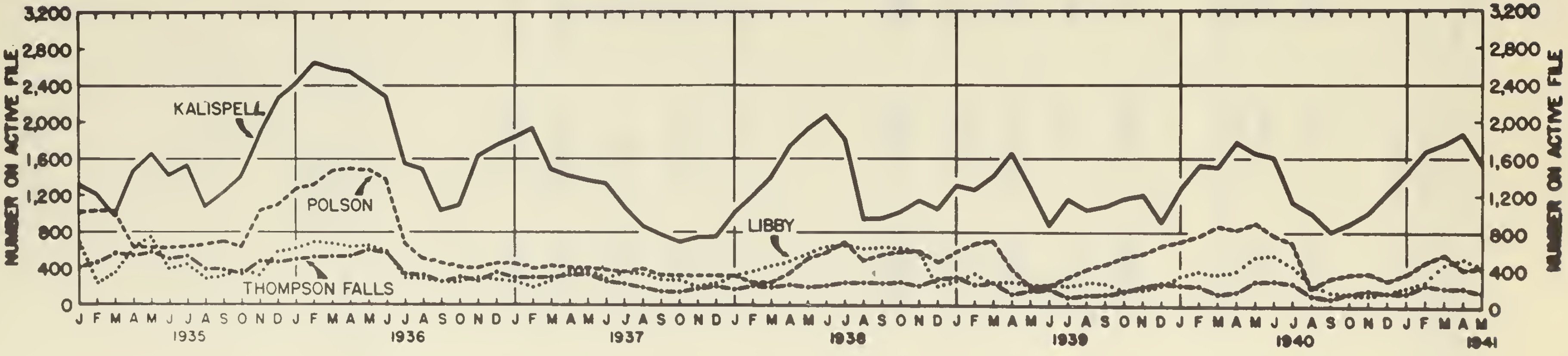


Figure 10.--Total Active File of the Unemployment Compensation Commission of Montana, by Counties, Kalispell-Flathead Subregion, 1935-1941.

Table XXII. Benefit Payments of Montana Unemployment Compensation Commission, Kalispell-Flathead Subregion, by Quarters a/

	1939 July-Sept.	1939 Oct.-Dec.	1940 Jan.-Mar.	1940 Apr.-June	1940 July-Sept.	1940 Oct.-Dec.
A. Amt. of Payments:						
Flathead	$ 6101	$19811	$92272	$39899	$12036	$27888
Lake	7309	11403	25567	13237	4924	5746
Sanders	1697	9693	16549	5330	2797	5929
Lincoln	850	2935	16049	8956	1806	3700
Totals	15957	43842	150437	67422	21563	43263
B. No. of Payments:						
Flathead	613	1851	8313	3998	1330	2639
Lake	748	1043	2339	1313	545	602
Sanders	141	779	1453	510	261	528
Lincoln	83	284	1422	871	163	342
Totals	1585	3957	13527	6692	2299	4111

---

a/ Data furnished by Unemployment Compensation Commission of Montana.

need relocating or resettling if they are to become self-supporting.[15]

Major Land Use Problems. -- Some of the more important problems involved in the utilization of the agricultural and forest land resources of the subregion may be summarized as follows:

(1) Most inadequate farm operating units that are unable to support adequately the farm families upon them. This situation reflects the fact that there are excessive numbers of farm families compared with the basic agricultural land resources of the area.

(2) A rapidly diminishing forest resource, because of commercial exploitation and failure to plan utilization on a sustained yield basis, as well as the attempts to transform forest lands into farm or orchard lands.

(3) Constant danger of loss of forest resources through fire, insects, and disease of growing young timber as well as mature stands, because of a lack of adequate protection and the unwillingness of owners to add to their costs the burden of carrying adequate protection.

(4) Unequal tax burdens, because of highly decentralized school district administration, lack of scientific land-classification data, and use of the property tax on total assessed value of standing timber, which forces exploitative cutting and failure to reforest cutover areas. (In many cases, the annual taxes levied against forest lands approximate or exceed the value of the annual growth of timber. Under these conditions, the private owner has only one of two alternatives -- either to cut his timber and cash in on his capital, thus escaping continued heavy annual property tax levies, or allowing the land to revert to public ownership, thereby reducing the taxable base for the support of local governmental services.)

---

[15] "Stranded families" are those still residing on submarginal agricultural land or located on a small piece of cut-over or other land unsuitable for agriculture, or in town where they are on relief or have very inadequate incomes from part-time work with which to support themselves. "Migratory families" are more the transient type, squatting in a locality for a season or more, with no permanent place of abode. The data on stranded and migratory families were secured by questionnaire in the spring of 1939 from county agricultural extension agents, county Farm Security supervisors, and agricultural leaders familiar with conditions in the various counties. (See Appendix Table IV of "Preliminary Report on Development of Economic Opportunities in Montana for Migratory and Stranded Families", Montana State Planning Board, Helena, October, 1939.

IV

A Recommended Program To Meet Existing Problems, And Increase Employment And Income Stability

What types of readjustments are most fitting in order to bring about a greater stability in employment and income in the area, and relieve at least a portion of the economic distress and difficulties accompanying the current problems of vanishing natural resources, stranded and migratory farm families, unemployment, low levels of living, and related problems?

General Direction of Readjustments. -- The great importance of forestry as the basis for the economy of the subregion makes it imperative that any readjustment program center its main attention upon activities which will place these forest resources upon a sound and permanent foundation. To do this will require an extensive program for forest land management, including: (1) Land use classification and zoning to insure against wrong use of land. (2) Adequate protection from fire, insects, and disease. Since private owners cannot afford, on the whole, to carry the costs of such protection, the state and federal governments must cooperate by making significant contributions. (3) In spite of such contributions, substantial quantities of forest land now privately owned cannot be assured of producing potential benefits to human welfare if it remains in private ownership. This means acquisition on a large scale by federal and state governments. (4) The resulting problem of reduced tax revenues for local governments after federal and state acquisition could be partly solved, at least, by providing for a more equitable reimbursement to such governmental units through "in lieu" payments and adjustments in present reimbursement laws. (5) In order to insure against unwise exploitative cuttings of forest lands, the state or federal government should have power to enforce proper practices safeguarding the forest resource by various regulatory devices. (6) A large portion of the timber species is unmarketable because of current lack of demand for species other than ponderosa pine, white pine, and cedar. It may be possible to increase demand by developing markets and methods of use through further research and educational work, which would render definite services to consumers and to local communities in the subregion in providing an outlet for labor.

(7) There is a great amount of protection, development, and cultural work which should be done in the forest areas of the subregion. If undertaken, such work would greatly increase the employment possibilities in the area. For example, organized fire control crews would provide greater security of employment for a group of selected, trained men of the locality, giving to them and their families a reasonable, constant, assured annual income. (They would effectively replace short-time, occasional jobs for transient

laborers.) Adequately financed development and cultural work would provide the means of extending the season of employment for the seasonal fire guard force, which now cannot be offered a season of sufficient length to provide an adequate annual income or to maintain a year-after-year organization of highly efficient and high-morale individuals. Provision for field planting of denuded areas, production of forest planting stock, improvement of stands by thinning, pruning and removal of undesirable trees, and related development and maintenance work would increase the work opportunities in the subregion and increase the amount of marketable, harvestable products.

(8) The present method of taxation of forest lands should be revised to encourage private owners to improve their management practices and to operate on a sustained-yield basis. At present, the administration of the property tax, which is the major source of revenue for most of the local governmental units in the area, is an important contributing factor to present management evils on private forest lands. Forest lands are not being assessed on their annual productive capacity or ability to pay, but on the value which could be secured by wrecking the forest and selling the products thus secured. The levying of annual taxes on the full stumpage value of the lands puts economic pressure upon private owners to convert their forest assets into cash by exploitative cutting. In some parts of the subregion, the annual tax levies equal or exceed the annual growth values of the forests. If private timber lands are to be managed in such a way as to provide recurring crops of timber, so that employment and incomes can be stabilized, timber must be taxed as a crop and not as real estate. A revision of Montana tax methods, somewhat along the lines of the Wisconsin Forest Crop Law, which makes a distinction between land and timber and fixes the annual land tax for fifty years, would be desirable legislation to improve the management of private forest lands in the area. Provisions of the type contained in the Wisconsin Forest Crop Law would also make it possible to secure desirable adjustments in the forest tax system without placing any undue hardship upon local governmental units, since payments by the state in lieu of taxes are made on an annual basis for the support of local governmental services.[16]

---

[16] An acre of forest land capable of producing a hundred board feet of timber yearly at a value of, say, $5 per thousand feet, would earn 50¢ per acre per year. Under the Wisconsin Forest Crop Law, the owner pays 10¢ per acre annually as a tax. When the timber is cut, he pays an additional 10¢ of the stumpage value of the products removed. The annual rate of 10¢ per acre averages considerably less than the usual taxes levied by local governments on forest lands within their boundaries. However, under the Wisconsin Forest Crop Law, the state of Wisconsin also makes a contribution to the local governments so that the per acre payment by the private owner, plus the state contribution, is a more satisfactory annual income for local governmental units than a growing delinquent tax list of abandoned, cut-over forest lands.

A revision of the method of taxing forest lands along the lines indicated above would have the added advantage of reducing the extent of federal and state acquisition of forest areas, and would therefore reduce the total public costs involved in effecting improved land-management practices on forest lands in the subregion.

Careful consideration of measures for reducing local governmental costs through reorganization of local governments and use of alternative sources of revenue should not be overlooked. In many sparsely settled areas contiguous to or within the boundaries of forest areas in the subregion, significant opportunities exist to make appreciable reductions in local government costs by intelligent planning and cooperation of local citizens. These reductions in local governmental costs need not result in a reduction in quality or quantity of services offered. As a matter of fact, many examples are available where adjustments and improvements made to reduce local governmental costs have actually resulted in an improvement in local services. Such examples include adoption of the manager form of government for counties and cities, and the county-wide unit for school administration to replace the present school district administration. In some counties of Montana, appreciable savings have been effected by consolidation of county offices. No legislation in Montana is needed to permit these governmental reorganizations, but a considerable amount of educational work and intelligent planning is necessary.

Employment possibilities in the Kalispell-Flathead Subregion, provided the above program were effected to develop and maintain the basic forest resources of the area, may be estimated roughly as follows: (1) For a program of needed and justified rehabilitation, improvements, and development work to be undertaken during a six-year period (this does not represent the total potential of this type of work, but merely an estimated six-year program period), nearly 2 million man days; and (2) for the annual current needs for protection and maintenance of development, administration of utilization, including the harvesting of forest products, employment in the livestock industry, servicing of recreation, etc., 94,000 man days. The estimate for (2) is for the extent of development and use of resources now existing, and the estimate would be increased considerably with further development and increased use.

Some idea of the extensive activities which could be undertaken in providing this employment may be obtained from the following list:

1. Fire control.
    - (a) Hazard reduction -- snag felling, control burning of dangerous fuel concentrations, etc.
    - (b) Construction and maintenance of lookout houses, airplane landing fields, etc.
    - (c) Fire detention and suppression, including training of "first line" fire control forces of lookouts, guards, dispatchers, packers, organized crew men, etc.

2. Protecting and improving the timber resource.
    - (a) Insect and disease control.
    - (b) Production of forest planting stock, including nursery development.
    - (c) Field planting of denuded areas.
    - (d) Forest culture, including improvement of timber stands by thinning, pruning, and removal of undesirable trees.
    - (e) Timber surveys and management plans.

3. Protecting and improving the range resource.
    - (a) Pest and predator control.
    - (b) Range revegetation.
    - (c) Construction and maintenance of range improvements -- water developments, fencing, etc.
    - (d) Range surveys and management plans.

4. Improving the wildlife, including the fishing resource.
    - (a) Wildlife surveys and management plans.
    - (b) Construction and maintenance of stream and lake improvements.
    - (c) Transplanting animals, particularly beaver, for restocking.
    - (d) Supervising utilization, including game patrols, checking stations, and the like.

5. Developing and facilitating use of the recreational land resource.
    - (a) Construction and maintenance of recreational improvements, including camp and picnic grounds, ski runs, and other such improvements.
    - (b) Recreational area caretaking and servicing, including keeping grounds clear, providing fuel, and special services.

6. Protection and improvement of watershed resources.
    - (a) Revegetation of watershed areas through regrassing, reforestation, etc.
    - (b) Construction of minor engineering works to hold back runoff and control erosion.

7. General-purpose forest improvements.
    - (a) Construction and maintenance of roads and trails.
    - (b) Construction and maintenance of administration buildings.
    - (c) Construction and maintenance of communication facilities.

8. Miscellaneous services.

    Making general surveys and maps, including aerial photography, or facilitating the various types of work noted above.

In addition to this, there is need for a continued and increased program of research in all phases of forest land protection, development, and utilization.

Improvements in Agricultural Land Utilization. -- Although agriculture is of secondary importance in most sections of the Kalispell-Flathead Subregion, it nevertheless plays a very important and, in some cases, major part in others. One of the most important needs, in many of the valleys that seem topographically suited for agricultural use, is a scientific classification of the land to determine its agricultural use capabilities. No such scientific classification has been made for the area, and only a small portion of the valley areas in Flathead County have thus far been surveyed. (This survey is now in process, and no completed report is yet available for any part of the area.) Public funds to insure completion of the classification surveys for all the valley areas of this subregion should be made available.

Along the same lines as the land classification work is the necessity for the passage of state legislation providing for zoning of the lands in the subregion. At present, Montana has no state enabling legislation permitting zoning by local governments, although it does have enabling legislation to provide for the organization of soil conservation districts. Soil conservation districts have generally been considered most applicable where the soil erosion problem is acute, and this would not be the major reason for land-use control in the Kalispell-Flathead Subregion. Consequently, it is felt that zoning legislation in which the lands of the area could be effectively zoned would be more desirable. An extensive educational program would necessarily have to accompany the zoning legislation and the adoptions of local ordinances.

Stabilization of the agriculture of much of the area in the valleys of the subregion depends upon making available a more reliable and adequate supply of irrigation water. Opportunities for sound irrigation development practices and enterprises are comparatively good in the subregion. The Flathead Diversion Project, in which considerable interest has recently been revived, is perhaps the most feasible low-cost irrigation development potentiality in the subregion. This project, involving the diversion of water from the Flathead River above Flathead Lake, near Columbia Falls, would irrigate 50,000 acres in Flathead County, 12,000 of which would need to be cleared. Most of these acres are included in present farm operating units, so that the added irrigation water would not be primarily for new farms, but to benefit existing operators in stabilizing their farming operations and increasing their yields. However, it is estimated that there would be more than 125 new farm operating units which could be developed, with an average size of

100 acres each.[17]

Other possible irrigation projects in the subregion include the Talley Lake Project, which involves 10,000 acres, the Lupfer Irrigation Project, involving 5000 acres, the Lost Lake Project, involving 1000 acres, all in Flathead County; the Flathead Project in Lake County, involving 33,000 acres, scattered clearing in the Swan Lake area involving 5,000 acres; the Twin Lakes Project in Lincoln County, involving 1000 acres; the Green Mountain Project in Sanders County, involving 3480 acres, of which 1680 need to be cleared and 800 of which could be irrigated; the Trout Creek Project, involving 5000 acres, 2000 of which would need to be cleared; and the Noxon-Heron Project, involving 10,000 acres, 5000 of which would need to be cleared; the Big L Beaver White Pine Project, involving 18,000 acres, 9,000 of which would need to be cleared; and the Clark's Fork and South Side Unit project involving 160 acres, all of which are located in Sanders County.

The estimated number of new farms and types of farms which could be developed if these irrigation projects were undertaken are shown in Table XXIII. It will be noted that a total of some 802 new farms could be developed, which is less than half of the total estimated stranded and migratory farm families reported in the survey made in the spring of 1939. However, many of the farm operating units included in the classification as "stranded and migratory" will receive some benefits through these possible irrigation developments by receiving increased supplies of irrigation water on some of their farm acreages, or by some new acreages becoming irrigated. Nevertheless, it seems logical to conclude that these potential irrigation projects would not adequately take care of the entire farm families now stranded in the four counties. Recent movement of families out of the area to West Coast defense plants, however, has reduced the number of stranded and migratory families somewhat, and if this outward movement continues for any length of time, there will not be an excess of population in the four-county area above that which the area could support on a comparatively stable and satisfactory level, if the above irrigation projects were developed and the forst rehabilitation program were effected. However, it will be noted from Table XXIII that many of the proposed irrigation projects are given deferred (Class C) ratings, and only two (the Talley Lake Project in Flathead County and the Green Mountain Project in Sanders County) are given primary rating (Class A). However, the other four proposed projects in Sanders County are given secondary ratings (Class B), although such projects as the Twin Lakes project in Lincoln County and the scattered clearings in the Swan Lake area, in Lake County, and the Lost Lake and Lupfer irrigation projects in Flathead County are given a C2 rating, which is the second grouping in Class C of deferred proposals. All of this means that before most of these projects are undertaken, there should be a very careful survey and study made of the economic feasibility and social desirability of undertaking the work. Whether or not all or most of these projects will be developed will depend to a large extent upon alternative economic opportunities in other areas and in industry, or alternative economic opportunities in forestry in the subregion itself, as well as the general agricultural policy which the nation is to follow in the years ahead.

---

[17] The Flathead Diversion Project was surveyed in 1906 by Paul S. A. Bickel, Consulting Engineer; and copies of this report are in the files of the Montana Water Conservation Board, also all available material concerning the project is comprised by the report. The Bureau of Reclamation recently surveyed the possibilities of the project, and Water Conservation officials of the state indicated to the authors that Reclamation officials felt it was one of the few remaining low-cost diversion projects in the West. It definitely needs further study and analysis. Since no large storage facilities are required, but only diversion through flumes and ditches, per acre cost is exceptionally low.

Further evidence of the need for careful consideration of these proposed irrigation developments is the recent finding of Army engineers in connection with the Hungry Horse Project, in Flathead County. There has been much local interest, in recent years, in the securing of favorable action by the Federal Government to develop the Hungry Horse Project; but a public notice of the Army engineers, North Pacific Division, dated February 13, 1941, N.P.D. 501, (Columbia-Clark Fork -- 49.16) shows an interim report "unfavorable to participation by the United States at this time in any improvement at Hungry Horse Damsite for which the War Department is responsible." The principal grounds upon which the adverse recommendation is based are "that the estimated cost of flood control storage under any plan for separate or multiple use of Hungry Horse dam and reservoir is materially greater than the value of the benefits that can be foreseen at this time; that irrigation of the upper Flathead Valley is not dependent upon the construction of storage; and that the prospective market for power does not justify the construction of the dam and power facilities at this time." The Hungry Horse project, which would involve many millions of dollars, has made a more spectacular appeal to the imagination of the people locally than the Flathead Diversion Project, which would cost only a fraction as much. However, the opinion of experts and scientists is that the latter project has many times the value of the Hungry Horse in stabilizing employment and income in the area. It is, therefore, essential that in developing a program of public works to stabilize employment and income in the Kalispell-Flathead Subregion, a very careful study of irrigation and related land development proposals be made and priority ratings established somewhat along the lines of those indicated in Table XXIII.

Another very important need to improve and stabilize the agriculture of the area is the development of strong agricultural

TABLE XXIII.--COUNTY CLASSIFICATION OF AGRICULTURAL LAND DEVELOPMENT PROPOSALS, FLATHEAD-KALISPELL SUBREGION a/

			Acres Proposed for Development				New Farm Potentialities Consequent to Development				
			Type of Development		Purpose of Development			Recommended Average Size (Acres)			
	Rating of Proposals	Total Acres Involved	Irrigation	Clearing	Primarily for New Farms	Primarily to Benefit Existing Farms	Type of Farm Suggested	Total	Crop	Other	Approximate No. of New Farms
Flathead County											
1. Talley Lake Project	A-2	10,000	10,000			10,000	Dairy	120	80 I	40 D	35
2. Flathead Project	C-1	51,000	51,000	(12,000)		51,000	General crop - livestock	100	80 I	20 D	125
3. Flathead Project #2	C-1	5,000	5,000			5,000	General crop - livestock	100	80 I	20 D	(12)
4. Lupfer Irr.	C-2	5,000	5,000			5,000	General crop - livestock	100	80 I	20 D	0
5. Lost Lake	C-2	1,000	1,000			1,000	General crop - livestock	100	80 I	20 D	0
Lake County											
1. Flathead Project	C-1	33,150	33,150			33,150	General crop - livestock	80 I	40	40	300
2. Scattered Clearing (Swan Lake Area)	C-2	5,000	5,000	5,000			Self-sufficing	20	5	--	200
Lincoln County											
1. Twin Lakes Project	C-2	1,000	1,000			1,000	General crop - livestock	80	30	50	0
Sanders County											
1. Green Mountain	A-1	3,480	800	1,680		1,800	General crop - livestock	80	50 I	30 D	0
2. Trout Creek	B-2	5,000	5,000	2,000		5,000	General crop - livestock	80	60 I	20 D	0
3. Noxon-Heron-Pilgrim-Elk Creek	B-2	10,000	10,000	5,000		10,000	General crop - livestock	80	60 I	20 D	30
4. Clarks Fork & S. Side Unit	B-2	160	160			160	General crop - livestock	80	60 I	20 D	0
5. Big L Beaver White Pine	B-2	18,000	18,000	9,000	9,000	9,000	General crop - livestock	80	60 I	20 D	100
Totals		47,790	45,110	34,680							802

a/ Data from summary of land inventory by V. M. Throop, Assistant Geographer, National Resources Planning Board - Regional Office, Portland, Oregon.

b/ A = primary proposals
B = secondary proposals
C = deferred proposals

cooperative marketing associations to market the small fruits and vegetables which can be produced in this area. With the possible competitive threat of expanded irrigation acreage resulting from the development of the Grand Coulee Project in Washington, which is closer to large Northwest consuming markets than the Kalispell-Flathead Subregion, it will be increasingly imperative for the farmers of the Kalispell-Flathead Subregion to market their products cooperatively if they are to receive satisfactory prices. To date, it has been extremely difficult to get any strong cooperative movement started and continued, with the result that a few of the more fortunate and larger producers have been able to secure fairly good market outlets, but most of the operators have usually had very unsatisfactory markets and prices. Most of the farm families in greatest need of more stabilized and higher farm income have little capital reserves or the comprehensive understanding of the requirements and possibilities for successful cooperative action. Extensive educational work would need to be done in this area if successful agricultural cooperative marketing is to be established, and it will be a very difficult job to secure strong cooperative effort with the heterogeneous types of peoples in the area. There is a serious lack of community service facilities, and the absence of the ties and bonds so essential for strong cooperative action is marked. Rural churches are conspicuous by their absence, and topographical conditions of the area (mountains, interspersed with valleys) contribute to make cooperative action extremely difficult. A public works program might well consider the possibilities and distribution of constructing numerous community center facilities, including buildings, and community activities of a recreational, educational, or religious nature.

Cooperative effort in the form of community work programs for self-help such as a community canning factory to can fruits and vegetables so that many of the farm families would have a year-round supply of these products would be well worth careful consideration. Along with increased development of cooperative marketing of fresh fruits and vegetables, there might well be a cooperative canning plant for commercial canning of certain fruits and vegetables, particularly small fruits, which seem to be produced in surplus quantities in the area.

Other Recommendations. -- The need for improved roads and highways in the area, particularly those running north and south, has been mentioned elsewhere. A public works program to assist in stabilizing employment and income in the area should give careful consideration to the construction of roads and highways so placed that the greatest possible development of the recreational land uses of the area can be made. The Kalispell-Flathead Subregion has many recreational land values in the form of scenery, game, fish, hot artesian wells, bathing and boating facilities, and camping areas, as well as other related recreational possibilities. These recreational resources have not been fully developed in the area, and will be only partially developed unless the forest rehabilitation, development, and maintenance program can be effected. The expenditures and types of work required for full development of these resources can hardly be undertaken adequately by local governmental units alone.

STATEMENT OF APPRAISAL OF THE VALUE OF THE INTEGRATED REGIONAL APPROACH TO EMPLOYMENT STABILIZATION AND PUBLIC WORKS EVALUATION

The application of the Integrated Regional Approach Technique to the Kalispell-Flathead Subregion (Flathead, Lake, Lincoln, and Sanders Counties, Montana) has revealed certain strong points, as well as certain weaknesses, in the technique.

There can be no doubt of the desirability of the attempt to abstract and to boil down to one page the major items analyzing the basic resources, problems, and needed program of adjustments for a fairly homogeneous area. This procedure of summarizing and telescoping the great variety of materials available from various sources is a particularly stimulating one for research workers and planners. However, attempts to apply the integrated technique in such a brief space of time have definitely indicated the extreme need of using individuals thoroughly familiar with the area and its problems and resources at first hand. Although there is a great wealth of material available in one form or another concerning the resources and problems of an area, there is a definite lack of reliable information concerning various aspects of each of these, and there is especially a paucity of reliable information regarding the economic feasibility and social desirability of agricultural land development proposals and effective public works programming. A great deal of confusion, unreliable data, and statements have resulted from the numerous local pressure groups which have endeavored to secure grants and public works allocations for their own individual, local projects without regard to the economic soundness and social desirability of such projects for the area as a whole. Adequate surveys by planning officials and public agencies to determine the feasibility and desirability of these various land development proposals have been lacking. Consequently, attempts to apply the integrated regional approach without time to check some of these proposals carefully in areas where such adequate surveys are not available have serious limitations. No doubt adequate surveys of the sort indicated are lacking for most of the western states.

The organization of materials for the one-page summary or abstract does not seem to be logically arranged to flow naturally toward the kind of program which should be undertaken. It seems to the authors that basic natural resources are the starting point for planning any desirable adjustment program for an area, since they determine the limits within which human activities must operate in the area. The information on characteristics of employment would seem to follow more naturally after the summarized appraisal of the basic natural resources, rather than before it.

Application of the integrated regional approach in a brief period of time such as two weeks or a month, for any given area, may mean that the last three columns under "Direction of Readjustments" and "Program" will be filled in largely from the individual's personal knowledge and experience rather than by a careful analysis and interpretation of the data in the preceding four columns, particularly the data in Column 3 and Column 4, "Essentials of Regional Economy" and "Current Problems". It is essential, if the integrated regional approach is to be effective and reliable, that the direction of readjustments and the program of over-all recommendations and public works recommendations be a logical result of the materials under the preceding four heads. To do this, however, requires considerable study over a comparatively long period, or else extremely close firsthand information and understanding of the area. Attempts to apply the integrated regional technique promiscuously by consultants unfamiliar at first hand with the area being studied would probably prove very unsatisfactory and dangerous. The mental process of putting the type of information called for in the seven columns on one page necessarily involves a careful weighing and appraisal of alternatives and priorities, particularly in regard to the type of recommendation called for in the last two columns under "Program", which requires mature judgment and close familiarity with the area and with the people themselves. Interviews with action, research, and planning agencies, or quick trips through the area, or simply analysis of printed or available reports on the area, are not adequate to assure a thoroughly reliable job to serve the basic purposes for which the integrated regional approach, as we understand it, was developed.

The effective use of the integrated regional approach requires the prompt and wholehearted cooperation of the action, research, and planning agencies, federal, state, and local, public and private, who have worked on one phase or another of the area's problems. The authors were fortunate in securing such cooperation, which made it possible to apply the technique fairly effectively in the brief time available. However, several of the agencies were anxious to do a careful and thoroughly scientific job, which was impossible in so short a time; nevertheless, it was felt that the net result of the entire process was to stimulate these agencies to point their work more directly toward practical adjustment recommendations and to take stock of much of the regular work which they are conducting. A tendency on the part of some agencies to want to evade controversial issues, or to present information which may not have been thoroughly checked and rechecked, may substantially hinder the work of applying the integrated regional approach technique in some areas. However, the net result should ultimately be a more courageous and practical point of view and effort on the part of these agencies, which in these times is certainly desirable.

DEMCO
LIBRARY SUPPLIES
Madison Wis. New Haven Conn.